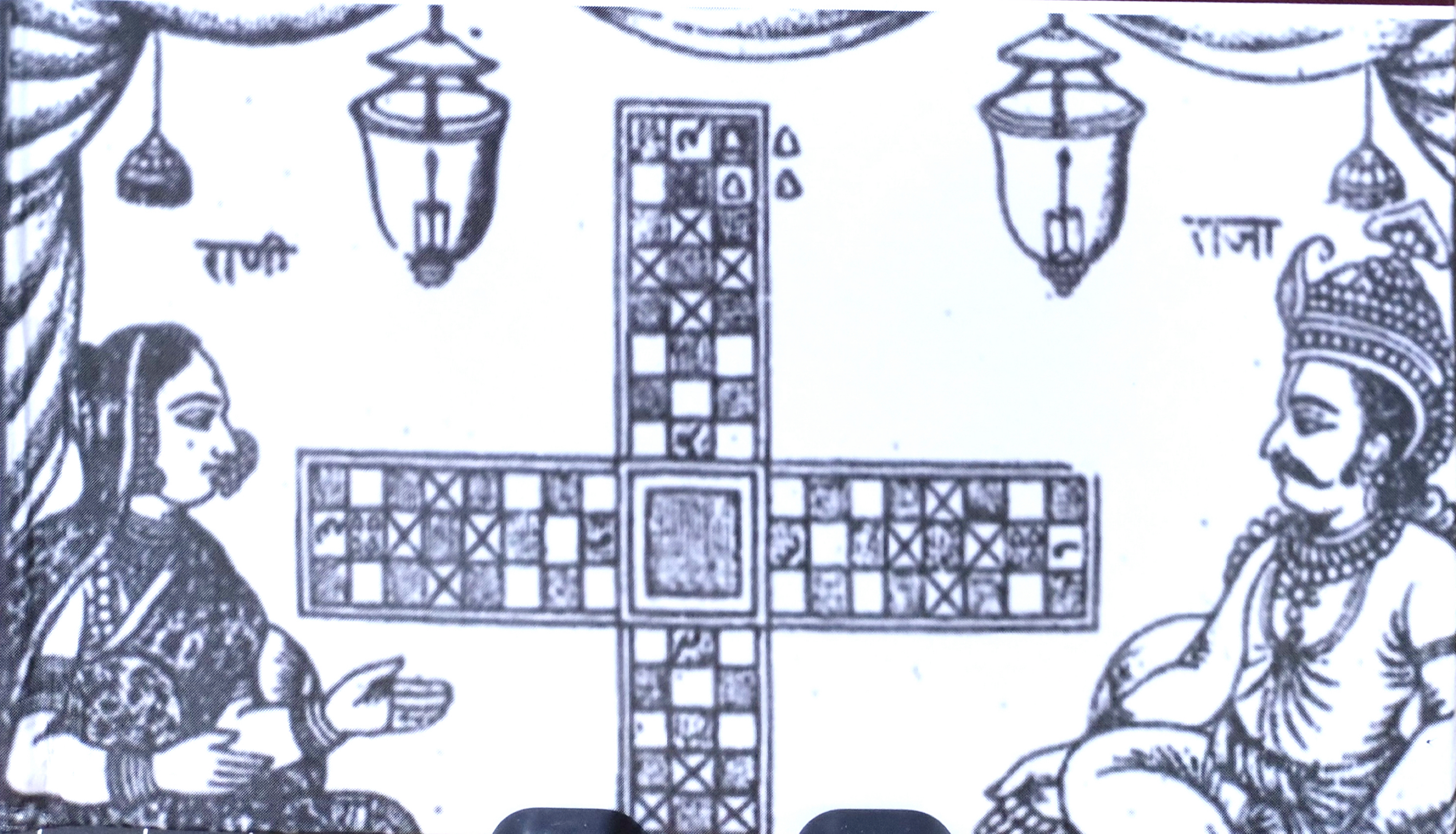
Ancient Indian Board Games

Deme Raja Reddy
Samiksha Deme



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Preface

Games areactivities that have been played from ancient times for pastime and amusement. These are usually contests based on a setof rules and decided by skill, judgment or sometimes on mere luck alone. There were very many board games that were played in ancient India such as chess, Pachisi etc. The Mahabharata is a great Indian epic in Sanskrit that describes how the Pandava king Yudhisthara lost everything in a game of dice while playing the eldest of the Kauravas named Duryodana.Pachisi and chess were played with dice in ancient times and it is difficult to say which type of gambling game that was played by these two important characters from Mahabharata. There is record about other types of games in ancient Indian literature and some of these games are still played these days, especially in villages. The first version of chessappeared in North Western partsof India during the Gupta period (4th to 6th century AD) and then spread to Persia where it was known as 'shatranj'.Chess was altered in Persia and it became a game played between two people instead by four as it was in ancient India. The queen piece was added to the game in Persia and chess then spreadfrom Persia to the east, west and north to various countries. The game reached Europe by about 10th century AD and by 15th century this game came to be known as 'royal game' because of its popularity among nobility. The game was modified in those countries though the basic game remained the same.For instance,a river was interposed between the two sides of the chess game in China, which made the game slower but more complex. It is interesting to know that the game of chess survived among the hundreds of board games invented and played throughout human history during the past 1500 years. This game has thrived in every culture it has touched and it has become the national game in undivided Russia. Games and other theories are woven around this game, which originated in ancient India as a war game.

Similar to chess, other board games have also originated in ancient India and each board game consists of squares and hasa basic design. These games are separated into two basic types.The first type are those wherepieces are moved alternately by the each player such as chesswhereas in the second type, the number of movements of the pieces are decided by throwingdice, cowries or even large seeds such as split tamarind seeds. The numbers, which are marked on them,have a known value and the number of moves of the pieces is decided. Pachisi is an example of the second type of game, which was considered to be an Indian national game. Most of the designs of the games are simple and do not need elaborate drawing and some of these can be made out with chalk or coal pieces and can be drawn on any type of flat surface. The rules of each game vary and some like chess have become very complicated which needs a detailed study to understand the game. Many of these games have been modified and are known by different names in different countries though the basic principles of the game remain the same. For instance, Pachisi is known as Ludo in England and Parcheesi in the U.S.A. A survey of our ancient temples and forts reveals the presence of designs of such games and they have remained because they were marked on the stones. For example,the Gudimallam temple located in Chittoor district of Andhra Pradesh in India has evidence of Pachisi, Chess and Dhadi games. Similarly there are other sites especially in medieval forts where these games were recorded such as Gandikota- Chess; Kondaveedu- Dhadi; Undrukonda-Ashta chamma; Rachakonda- Pachisi and Dhadi; Devarakonda-Tiger &goats'game, Fatehpur Sikri-Pachisietc. Govindarajaswamy temple is located in the Hindu holy city of Tirupati, which has markings of Pachisi, Dadhi, Tiger and goats game etc. In most of these places there are designs of other board games, whichcannot be identified at present and obviously they have been forgotten by the humanity. Following is a brief description of some of these board games, which are present in ancient temples and forts. Many authors' recorded ancient board games in other parts of the world such as orient and in middle-east(Falkener 1892; Culin 1895). Throughout Egypt, Petra and Nabataean sites in middle-east ancient board games were discovered. Some of these were marked in stone and hence remained to be found. In these sites a common game was made up of 4 X 12 playing spots which were carved as cup shaped depressions in the rock. Similar games were found in some sites in ancient forts of India. Such game was known as 'Mancala' in some parts of Arab world and Africa. Some games known as labyrinths have been discovered in Nabataean sites and similar labyrinths were also found in Indian forts.

The information about ancient board games can be found in literary works and their markings on stones in the ancient places such as temples and forts in different parts of India. The most common writing material in the Indian subcontinent for almost two thousand years was palm leaf. The writing process was tedious and the material would not last 3-4 hundred years. Again the manuscript needed to be redone. Other material used in ancient

India was stone or copper plates. These would last for a very long time. First attempt at writing on stone was attempted during the third century BC during the rule of Asoka of the Mauryan dynasty. The rock inscriptions of Asoka are readable even after a really long time. Copper plate inscriptions also have a very long history in India and earliest of them are recorded from 1st century BC from excavations. The ancient Indian scripts namely Brahmi and Kharoshti came to be known through inscriptions marked in stones and copper plates. All the Indian scripts evolved from Brahmi and the evolution of different Indian scripts from Brahmi came to be known from these inscriptions. Some temples besides the religious aspects of the deity also depict the social themes of the period such as dances and even games such as wrestling. For example sculptures of the Kakatiya period depict the dance forms as well as games played in ancient times. For example the temple of Ramappa dated to 1213 AD depicts the dance form Perini which was practiced in those times. This dance form was forgotten and artists in the recent past revived the Perini dance based on its display of this medieval dance form as depicted in stone carvings in the Ramappa temple. Some of these ancient temples also display the games such as wrestling. Surprisingly more than hundred different grips of wrestling are depicted on the walls of this temple. Similarly a study of ancient forts and temples also revealed the ancient board games which have been forgotten and they could be revived.

Following chapters describe the board games drawn on stones in some ancient temples and forts and later individual board games are briefly described. The epilogue concludes the observations in the book followed by select bibliography.

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①

References to board games in ancient literary works, inscriptions and markings in temples and forts

Antiquity of some of the Indian board games can be established based on the references to them in ancient literary works, inscriptions and their drawings in ancient temples and forts. Reference to a dice game in Indian epic Mahabharata is too well known. Similarly, there is mention about chess, which was known as 'chaturanga' in inscriptionson stones. The drawings of these games on stones in ancient temples and forts are another piece of evidence of these games in ancient India.Chess pieces found in excavations datable to ancient and medieval period is another piece of evidence of the antiquity of some of the board games. The earliest known chess pieces were found at Afrasaib near Samarkand in Uzbekistan that are datable to 760 AD. In India, evidence of early chess game was not found and earliest chess pieces were found in Nashipur in Murshidabad district of West Bengal that can be dated to around 900 AD.

a). Literary works:

India had a great literary tradition starting from Vedas and these scriptures can be classified into two broad categories:

'Shruthi' are the scriptures which have been heard and handed down from ancient times such as Vedas and Upanishads. 'Smrithi' are the scriptures, which have been written and remembered, and they are Vedangas, Dharmashastras, Puranas, Agamas, Dharshanas, Epics(Ramayana and Mahabharata), Upavedas, Sutras and Tantras. Vedas are the most ancient and they are dated around 2300 to 2500 BC.There is mention about games in epics and other literary works. Ancient literary works including the travelogues of foreigners mention about the games played in India those days. For, example Abu Rayhan Al-Biruni (AD 973-1048) was a Persian scholar who sometime after 1017 AD came to India and made a comprehensive study of its culture (Scheppler 2006; Sachau 1888, 2009). He wrote a history of India titled 'Tarikhal-Hind' and recorded the board games especially the chess that were played in medieval period in our country.Al- Biruni was a master astronomer and Muslim scholar. He wrote more than 200 works but few remain now. He made an extensive study of India and culture of its people. He came across new concepts in mathematics some of which were previously unknown outside Indian borders. He wrote no fewer than eight books on Indian arithmetic, introducing many of these concepts into Muslim lands and beyond for the first time. There were other visitors to India from many other countries in the past and they recorded their studies of India. Such as a Greek sailor in first century AD who wrote 'Periplus of the Erythrean Sea' which was a handbook on navigation in Indian Ocean. Fa Hsein (399-414 AD), Hsuan Tsang (629-645 AD), Ibn Battuta (1325-1349 AD), Cheng Ho (1405-1433 AD), Nicole de Conti (1414-1437 AD), Perode Covilhao (1487-1490 AD etc. were other visitors to Indian Ocean and India. From Vasco de Gama (first voyage in 1498 AD) started the European travels to India from the 15th century onwards until its occupation. It appears from literary sources from India that chess, pachisi, tiger and goats game and 'ashtachamma' were very popular. Surveys of the ancient literature of the Deccan between 1295-1724 AD in Arabic, Urdu, Kannada, Marathi, Sanskrit and Telugu languages rarely describe the games played by the people in that period (Sherwani and Joshi 1974). This monograph describes the two relevant books on games of the period such as 'Kridabiramam' and 'Siddheswara Charitamu' that describe the life of poor and aristocratic people living in the Kakatiya period (AD 1083-1323) and the games played for pastime by the people.The former work is by Vallabaraya and Srinatha and they lived in the 15th century AD and the later work is by Kase Sarvappa. The other literary works especially in Telugu of themedieval period mention in detail about some of the board games that were played in that period namely pachisi, tiger and goats and Dhadi (Somasekhara Sarma 1948; Pratapa Reddy 1949). There was also description of a dice game of the gambling type that was played by the wealthypeople during the rule of Reddy kings (AD 1325-1448) and this appears to be like the game described in Mahabharata.

William Jones (AD 1746-1794), one of the greatest linguist who ever livedand was the founder of Royal Asiatic Society of Bengalwrote on the Indian game of chess known as 'chaturanga' and proved that chess was invented by Indians as a war game (Jones 1817AD). The game of Chaturanga, that is, the four 'angas' or members of the army namely first elephants, followed by horses, chariots and foot soldiers.According to fables of Visnusarman, this game was imported to Persia in the sixth century AD. The name of the game was first changed to Chatrang, which ultimately corrupted to 'Shatranj' in Persia. The game of Chaturanga was also referred to as Chaturaji or four kings. Hence four people played the gamein ancient India.Amarakosha, which is a Sanskrit thesaurus that was compiled in the fourth century AD,explains the functions of each of these four members and their mobility.Jones quoted from this book that explains some general rules of the game: such as 'the pawns and the ship can both kill and may be voluntarily killed, while the king, the elephant and horse may slay the foe, but cannot expose themselves to be slain' and so on (Jones 1817 AD).

Kridakausalyam is a Sanskrit text with Hindi translation written by Pandit HariKrishna Sarma (1982 AD) that deals exclusively with ancientIndian board games including games such as pachisi, chess, tiger and goats' game etc.This book on games is a chapter from a larger book titled 'Brihajyothishyaarnavam' which was first published by the same author in 1881. Kridakausalyamwas first published in 1934 and reprinted in 1982. The source of the larger book Brihajyothishyaarnavam was not revealed. Most likely it was an ancient manuscript in palm leaves and was published with Hindi translation and commentary by Sarma.Like all ancient Sanskrit texts the source of the book may be attributed to pantheon of Indian gods and goddesses. Book mentions that goddess Parvathi defeated Lord Shiva in a game which upsets the god who leaves home to woods dejected. He is brought back by his son Lord Ganesha.Same is true of ancient Indian system of medicine Ayurveda.Ayurveda was said to have been received from Brahma and then passed through various sources such as Dakshaprajapati, Indra, Bharadwaja, Atreya, Agnivesha and finally reached Dhanvantari who is deified as god of medicine. The book 'kridakausalyam details why it is important to play the games not only for entertainment but also to improve cognitive skills.There are twelve chapters each dealing with one game and explains how to plan a win in the games. It is interesting to note that chess was played differently on a 64, 100 and 124 squares grid. The number of players could be either four or two and this fact was confirmed by Al-Beruni in the 11th century AD. In some ancient forts such as Rachakonda there are designs of a game with 100 squares and this must be one type of chess game played in ancient India.

b. Inscriptions:

Inscriptions on stones in Indiawere first made by the Mauryan emperor Asoka in the 3rd century BC and the practice was continued by subsequent rulers that contributed greately to the study of ancient Indian history. Most of these inscriptions are religious in charector and only some of these are official in nature. It has been authoritatively stated that almost 80% of ancient Indian history before 1000 AD is derived from inscriptions (Salomon 1998).The practice of writing on stones was continued by Indian rulers and later they were made by even common folk.There are millions of inscriptions in the country. It is extremely rare to findreferences to board games in such stone inscriptions in the medieval period. We could find only two inscriptions refering to chess in a survey of epigraphic literature from India. First inscription is assigned to 16th century AD which was found at Kuchinapudi, in Repalle Taluk of Guntur district of Andhra Pradesh that recorded a donation to a temple by a Chess professional Virayya. Inscription also reveals that this game known as 'chaturanga' was popular even in rural areas of India (Sastry 1937). Second inscription records the presentation of Koppolu village in Kadapa district of Andhra Pradesh to an individual by the name of Bodducherla Timmana by the Vijayanagar king Sadashivaraya in appreciation of his proficiency in the game of chess-Fig.1 (South Indian epigraphy, 1938-1939). This inscription was issued in the year 1466 Saka era which corresponds to 1544 AD and it is obvious that chess was a popular game in the medieval India and there was royal patronage to the game also.

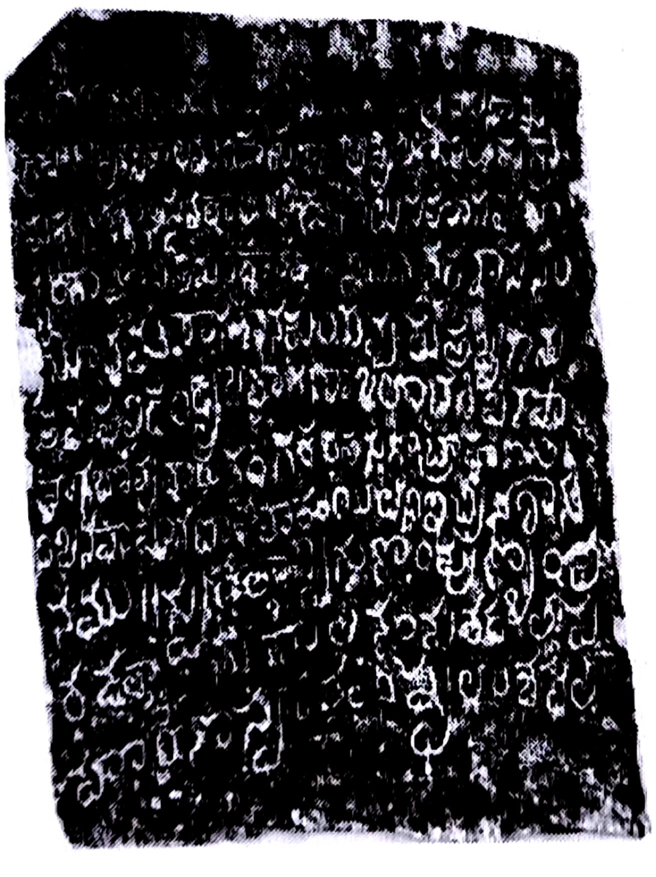


Fig.1: Part of stone inscription from Koppolu village of Kadapa district in the state of Andhra Pradesh of the year 1466 AD. This inscription was made in the name of Bodducherla Timmana by the Vijayanagar king Sadashivaraya (1542-1569 AD) in appreciation of his proficiency in the game of chess.

c. Markings on stones in temples and forts:

A: Hindu temple is a place of worship for the followers of Hinduism and it is the most characteristic artistic expression of their religion (Fig.2). The temples were built for more than two thousand years and those built of brick and wood perished but those built in stone remain even today. Temples were built to glorify the deity within but during the medieval period temple also became common meeting place and even as a

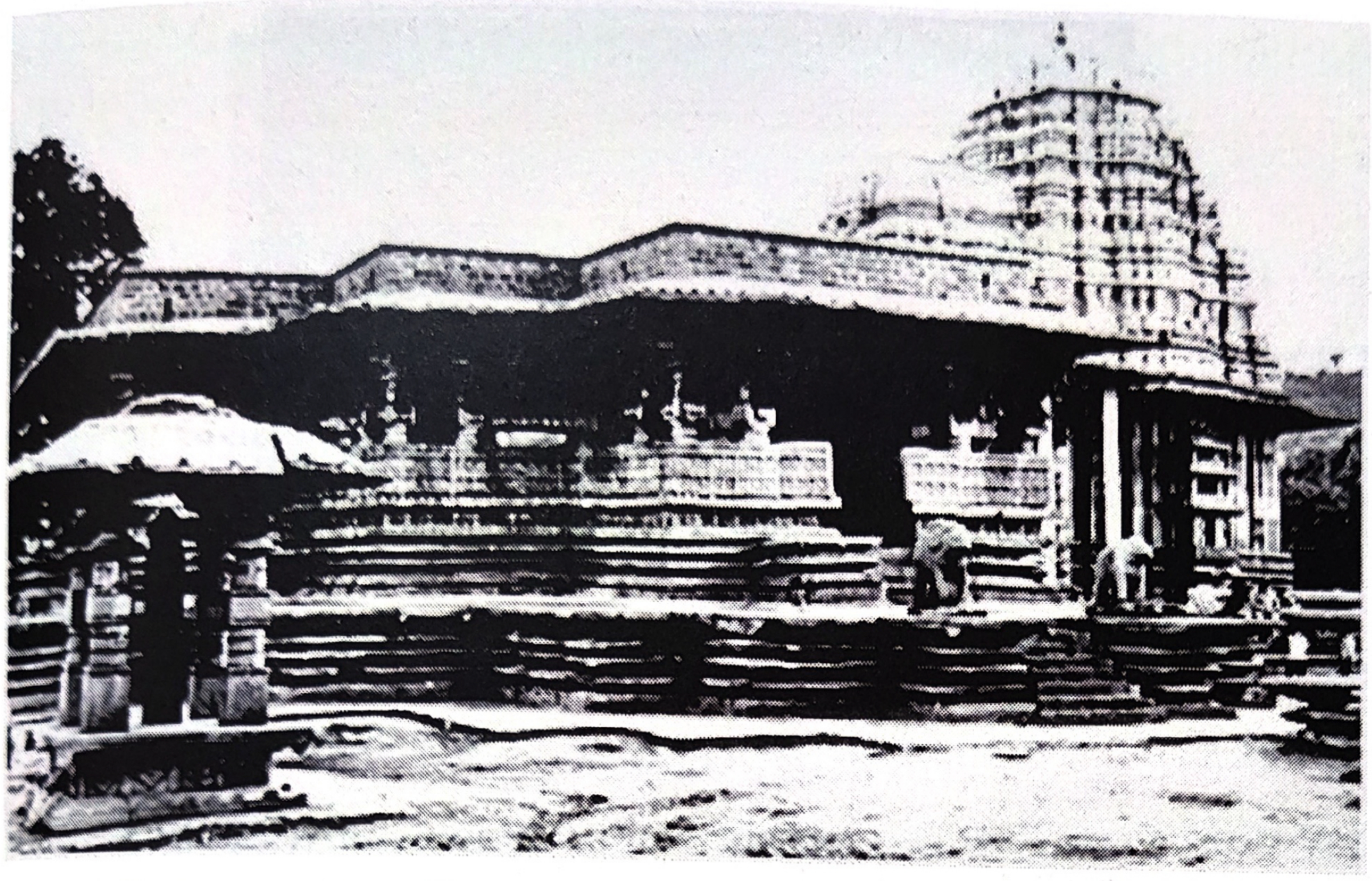


Fig.2: Hindu temple at Ramappa was built during the Kakatiya period and was completed in 1213 AD. Main deity of worship is god Shiva.This temple is an example of a large medieval Hindu temple.

place of entertainment. The temple provides a focus for both social and spiritual life of the community it serves and it is a sort of link between man and that of gods. It is in these stone temples Hindu architecture developed and the techniques and style varied between north and south India and also the period of construction of the temple. Temple architecture reveals the costumes, ornaments worn by the people of those times and some may reveal the musical instruments as well as the weapons worn by the men and women.Some temple panels depict the life of the people in ancient India (Fig.3). Khajuraho temple in Madhya Pradesh of India is known for its erotic sculpture also depicts men and women playing musical instruments, performing gymnastics, holding wrestling matches, going for hunting etc (Agarwal 1964). This temple was built was built in the 10th and 11th centuries AD.Some other temples depict the dance styles of the era and one such

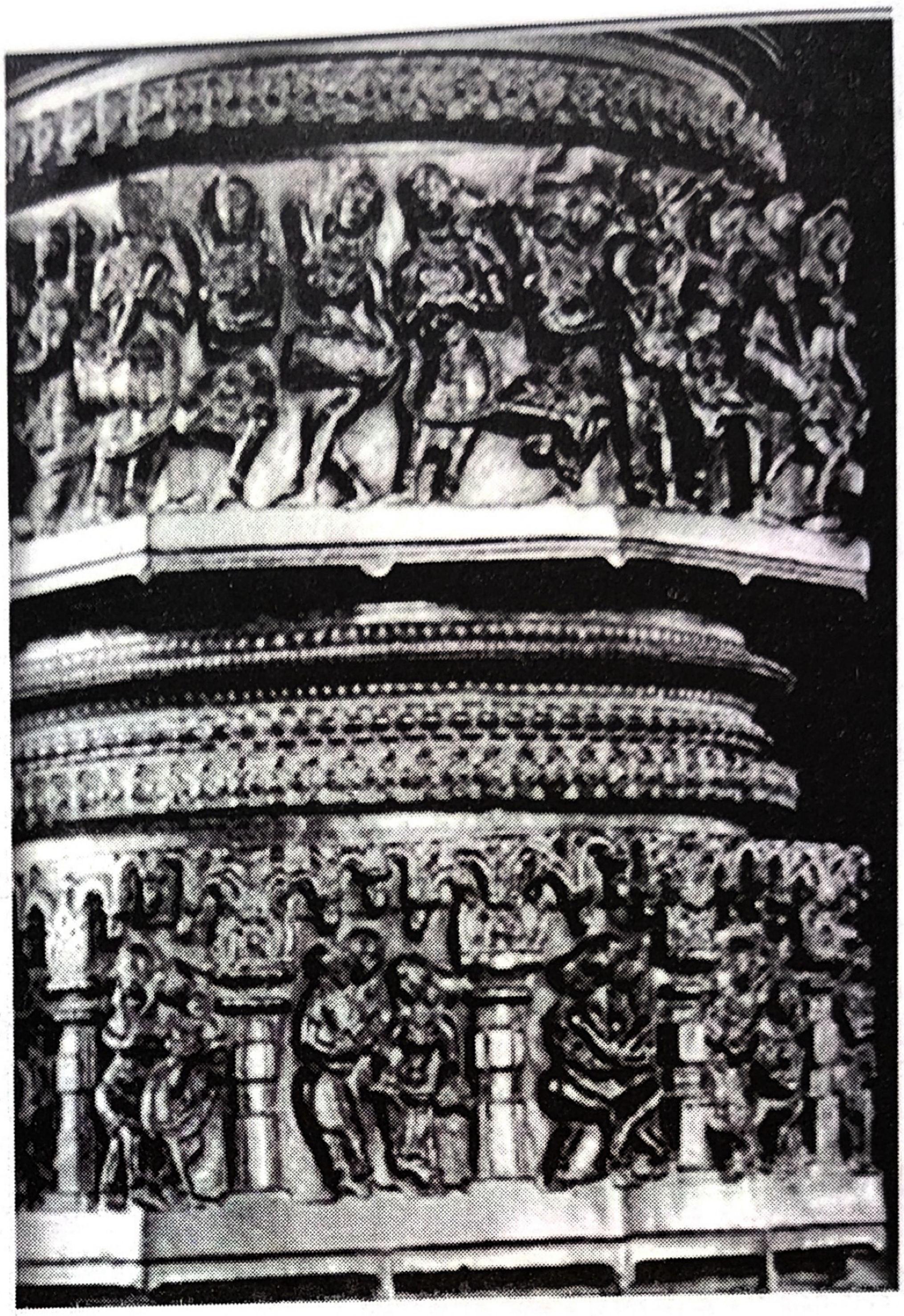


Fig.3: Sculpture on the pillars of the temple depicting the social life of those times.Dance forms and musical instruments can be appreciated. Perini dance form was depicted in this temple on pillars and panels and this medieval dance style which was forgotten was resuscitated after centuries.

example was thedepictions of warrior dance Perini Shivatandavam in Ramappa temple built during the rule of Kakatiya period (1068-1323 AD). Many temples such as at Ramappa, Tadpatri, Ghanapur central India depict popular Indian wrestling game including its 132 grips. Hence temples have been studied to learn about many aspects of our past. Temples not only illustrate the architecture of that period but also reveal social life of the people including the games they were playing those days (Fig.4 & 5)

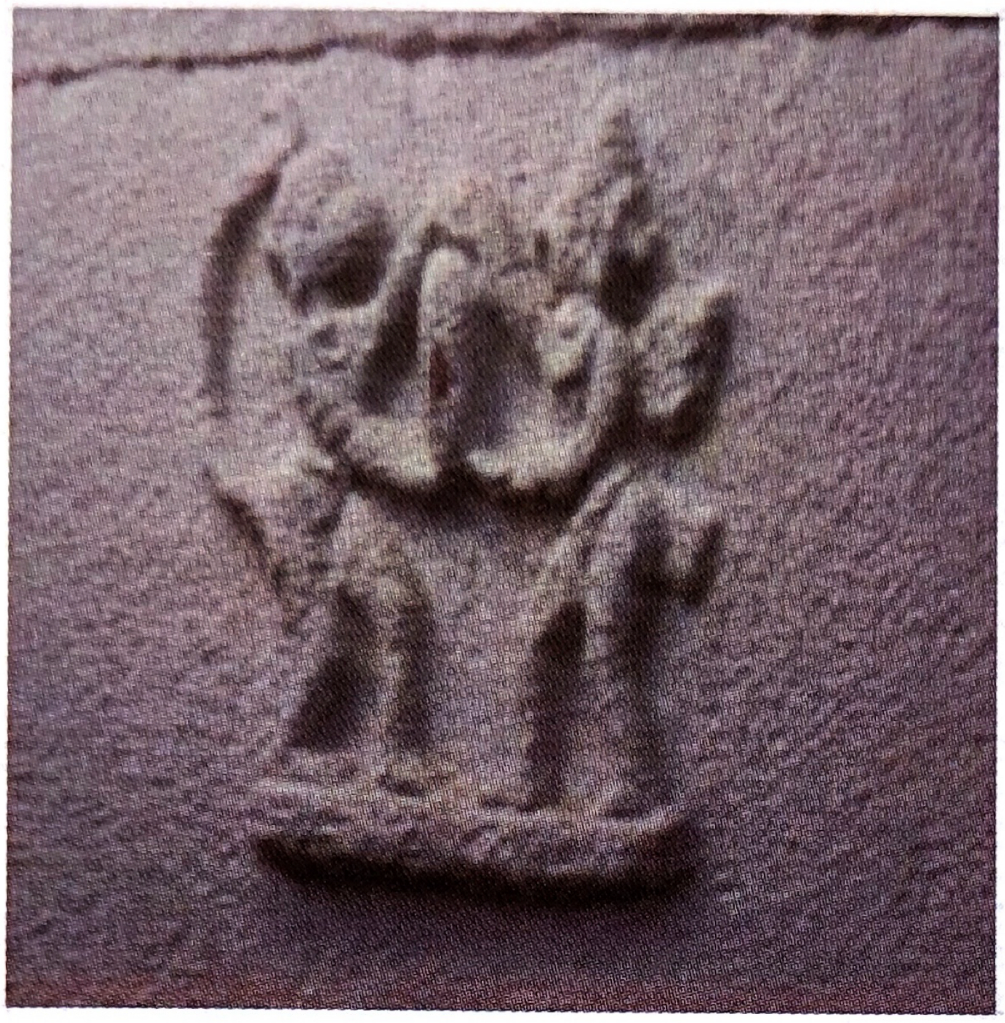


Fig.4: A type of wrestling known as 'MallaYuddha' depicted in a temple in Bejjanki in Karimnagar district of Telangana state in India.

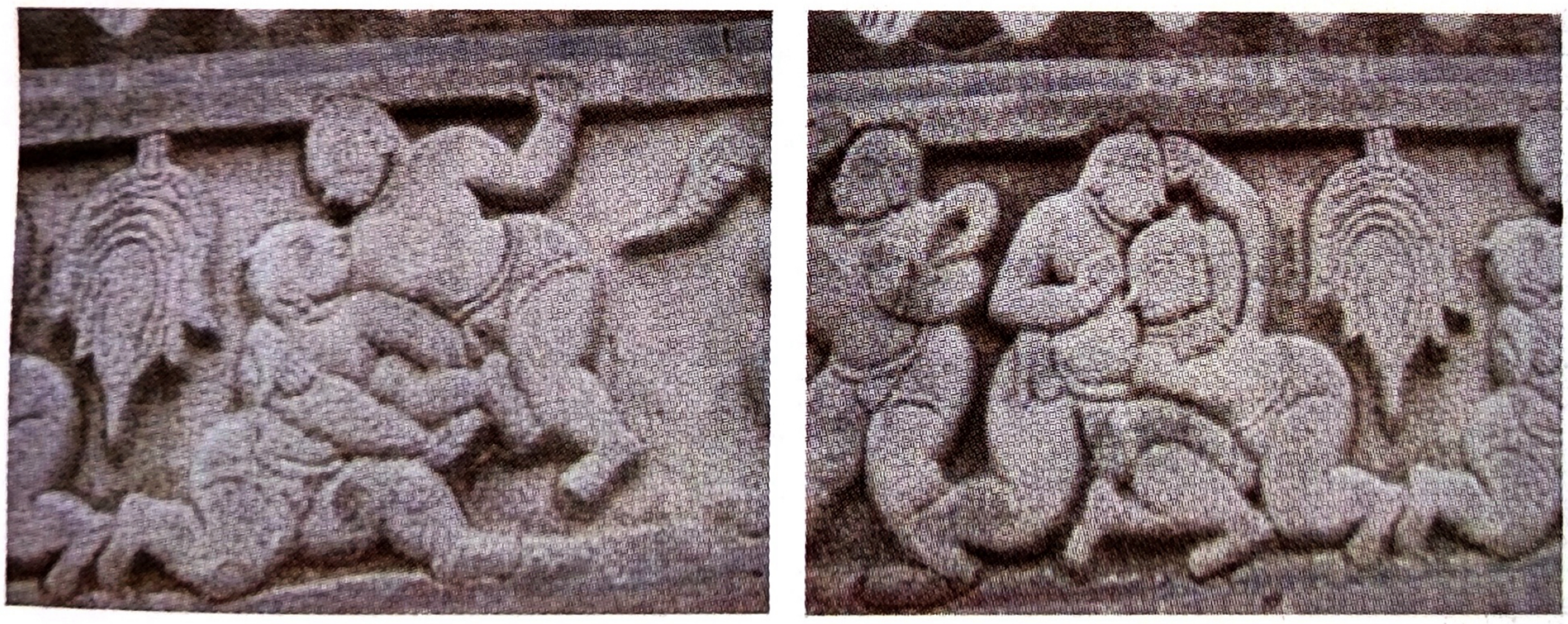


Fig.5 a & b: Scenes from a wrestling match demonstrating different types of grips in a temple in Telangana. Indian type of wrestling seem to be popular in ancient India.

Temples: Two ancient temples whose antiquity can be established have been surveyed to find out the evidences of ancient Indian board games in their premises. The same must be true of other old temples in the country. First is the Parasuramesvara temple at Gudimallam and the second is the Govindarajaswamy temple in the Hindu holy city of Tirupati.

1. The Parasuramesvara templein Gudimallam (79.34 E. Long; 13.34 N. Lat)

Gudimallam is one of the oldest temples in India and this is anunostentatious small village thatis located in Srikalahasti mandal of Chittoor district in the state of Andhra Pradesh. It is located about 40 kilometers from the religious town of Tirupati and the temple is known as Parasurameswara (Fig. 6, 7, 8 & 9). The archaeologists date this temple variously between 2nd century BC to 2nd century AD based on excavations inside the temple and find of pottery, bronzes, punch marked coin and the Shivalinga (Sarma 1994).

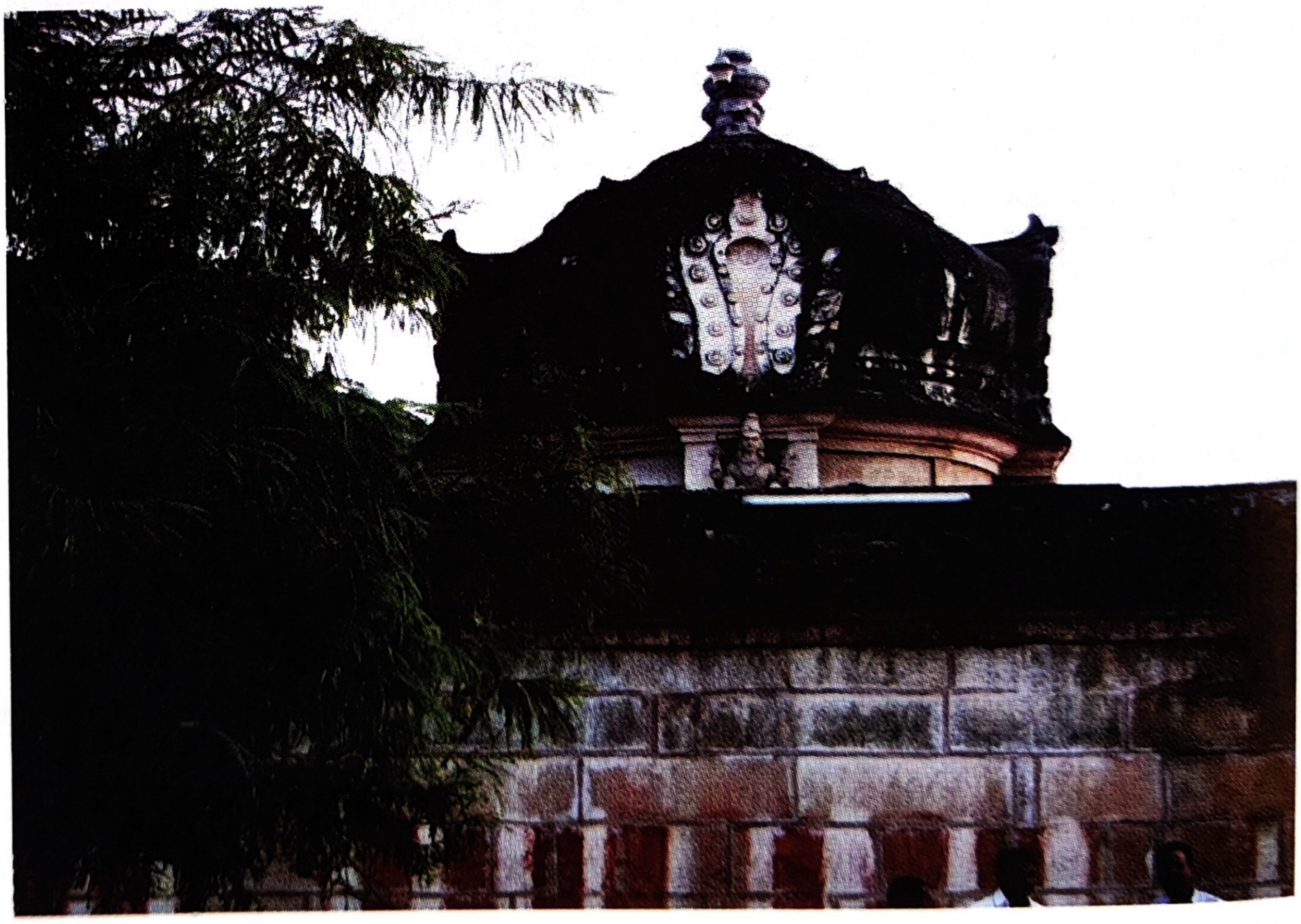
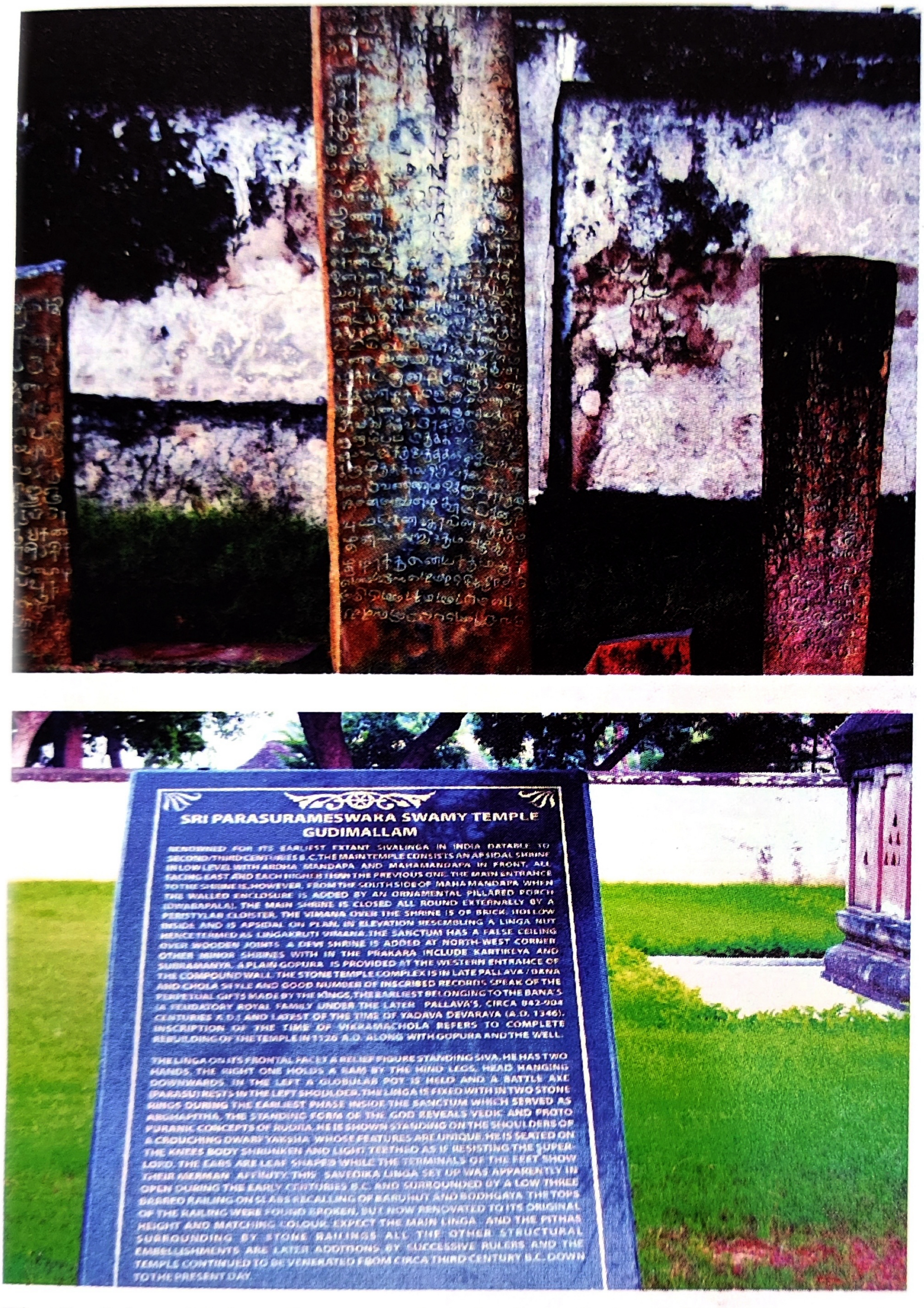


Fig.6: This temple is one of the oldest in India. This Shiva temple was built on an earlier Buddhist site.There were other evidences of its antiquity such as Satavahana period bricks etc.that helped in assigning the approximate date of its construction.

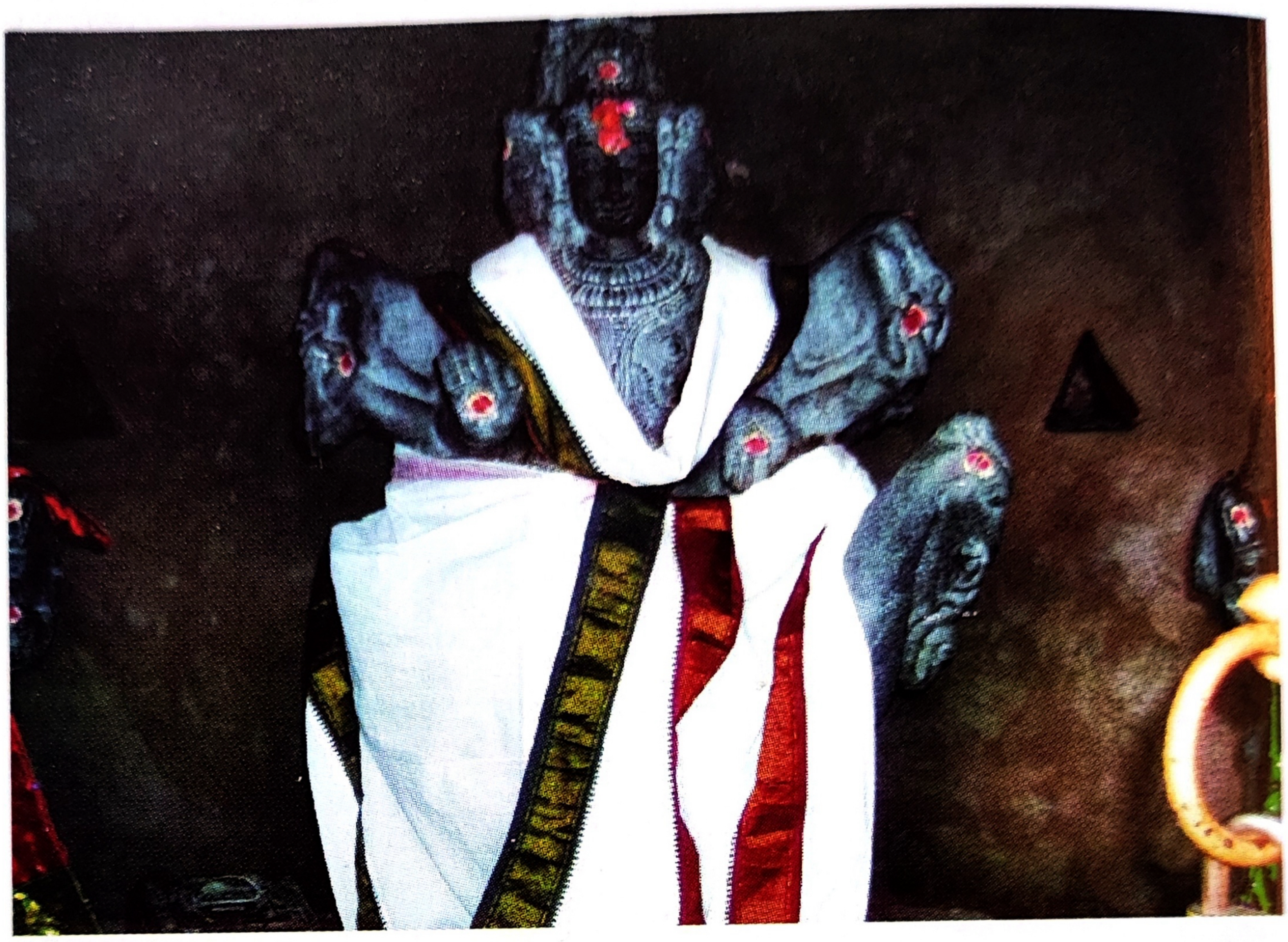


SRI PARASURAMESWARA SWAMY TEMPLE
GUDIMALLAM

RENOWNED FOR ITS EARLIEST EXTANT SIVALINGA IN INDIA DATABLE TO SECOND/THIRD CENTURIES B.C. THE MAIN TEMPLE CONSISTS AN APSIDAL SHRINE IN LOW LEVEL WITH ARDHA MANDAPA AND MAHAMANDAPA IN FRONT, ALL FACING EAST AND EACH HIGHER THAN THE PREVIOUS ONE. THE MAIN ENTRANCE TO THE SHRINE IS, HOWEVER, FROM THE SOUTH SIDE OF MAHA MANDAPA WHEN THE WALLED ENCLOSURE IS ADDED BY AN ORNAMENTAL PILLARED PORCH (DWARAPALA). THE MAIN SHRINE IS CLOSED ALL ROUND EXTERNALLY BY A PERISTYLAR CLOISTER. THE VIMANA OVER THE SHRINE IS OF BRICK, HOLLOW INSIDE AND IS APSIDAL ON PLAN, IN ELEVATION RESEMBLING A LINGA BUT HENCE TERMED AS LINGAKRUTI VIMANA. THE SANCTUM HAS A FALSE CEILING OVER WOODEN JOINTS. A DEVI SHRINE IS ADDED AT NORTH-WEST CORNER. OTHER MINOR SHRINES WITH IN THE PRAKARA INCLUDE KARTIKEYA AND SUBRAMANYA. A PLAIN GOPURA IS PROVIDED AT THE WESTERN ENTRANCE OF THE COMPOUND WALL. THE STONE TEMPLE COMPLEX IS IN LATE PALLAVA / BANA AND CHOLA STYLE AND GOOD NUMBER OF INSCRIBED RECORDS SPEAK OF THE PERPETUAL GIFTS MADE BY THE KINGS, THE EARLIEST BELONGING TO THE BANA'S (A FEUDATORY ROYAL FAMILY UNDER THE LATER PALLAVA'S, CIRCA 842-904 CENTURIES A.D.) AND LATEST OF THE TIME OF YADAVA DEVARAYA (A.D. 1346). INSCRIPTION OF THE TIME OF VIKRAMACHOLA REFERS TO COMPLETE REBUILDING OF THE TEMPLE IN 1126 A.D. ALONG WITH GOPURA AND THE WELL.

THE LINGA ON ITS FRONTAL FACET A RELIEF FIGURE STANDING SIVA. HE HAS TWO HANDS. THE RIGHT ONE HOLDS A RAM BY THE HIND LEGS, HEAD HANGING DOWNWARDS. IN THE LEFT A GLOBULAR POT IS HELD AND A BATTLE AXE (PARASU) RESTS IN THE LEFT SHOULDER. THE LINGA IS FIXED WITH IN TWO STONE RINGS DURING THE EARLIEST PHASE INSIDE THE SANCTUM WHICH SERVED AS ARGHAPITHA. THE STANDING FORM OF THE GOD REVEALS VEDIC AND PROTO PURANIC CONCEPTS OF RUDRA. HE IS SHOWN STANDING ON THE SHOULDERS OF A CROUCHING DWARF YAKSHA WHOSE FEATURES ARE UNIQUE. HE IS SEATED ON THE KNEES BODY SHRUNKEN AND LIGHT TEETHED AS IF RESISTING THE SUPER-LORD. THE EARS ARE LEAF SHAPED WHILE THE TERMINALS OF THE FEET SHOW THEIR MERMAN AFFINITY. THIS SAVEDIKA LINGA SET UP WAS APPARENTLY IN OPEN DURING THE EARLY CENTURIES B.C. AND SURROUNDED BY A LOW THREE BARRED RAILING ON SLABS RECALLING OF BARUHUT AND BODHGAYA. THE TOPS OF THE RAILING WERE FOUND BROKEN, BUT NOW RENOVATED TO ITS ORIGINAL HEIGHT AND MATCHING COLOUR. EXPECT THE MAIN LINGA AND THE PITHAS SURROUNDING BY STONE RAILINGS ALL THE OTHER STRUCTURAL EMBELLISHMENTS ARE LATER ADDITIONS BY SUCCESSIVE RULERS AND THE TEMPLE CONTINUED TO BE VENERATED FROM CIRCA THIRD CENTURY B.C. DOWN TO THE PRESENT DAY.

Fig. 7a & b: a: Yadava Devaraya inscription of AD 1346 on the left side. There are many inscriptions in this temple complex issued by Pallava, Bana and Chola rulers dated between 842- 904 AD. b. The plaque on the right side is inserted by the archaeological department of the government of India that details the information about the temple as well as the inscriptions.



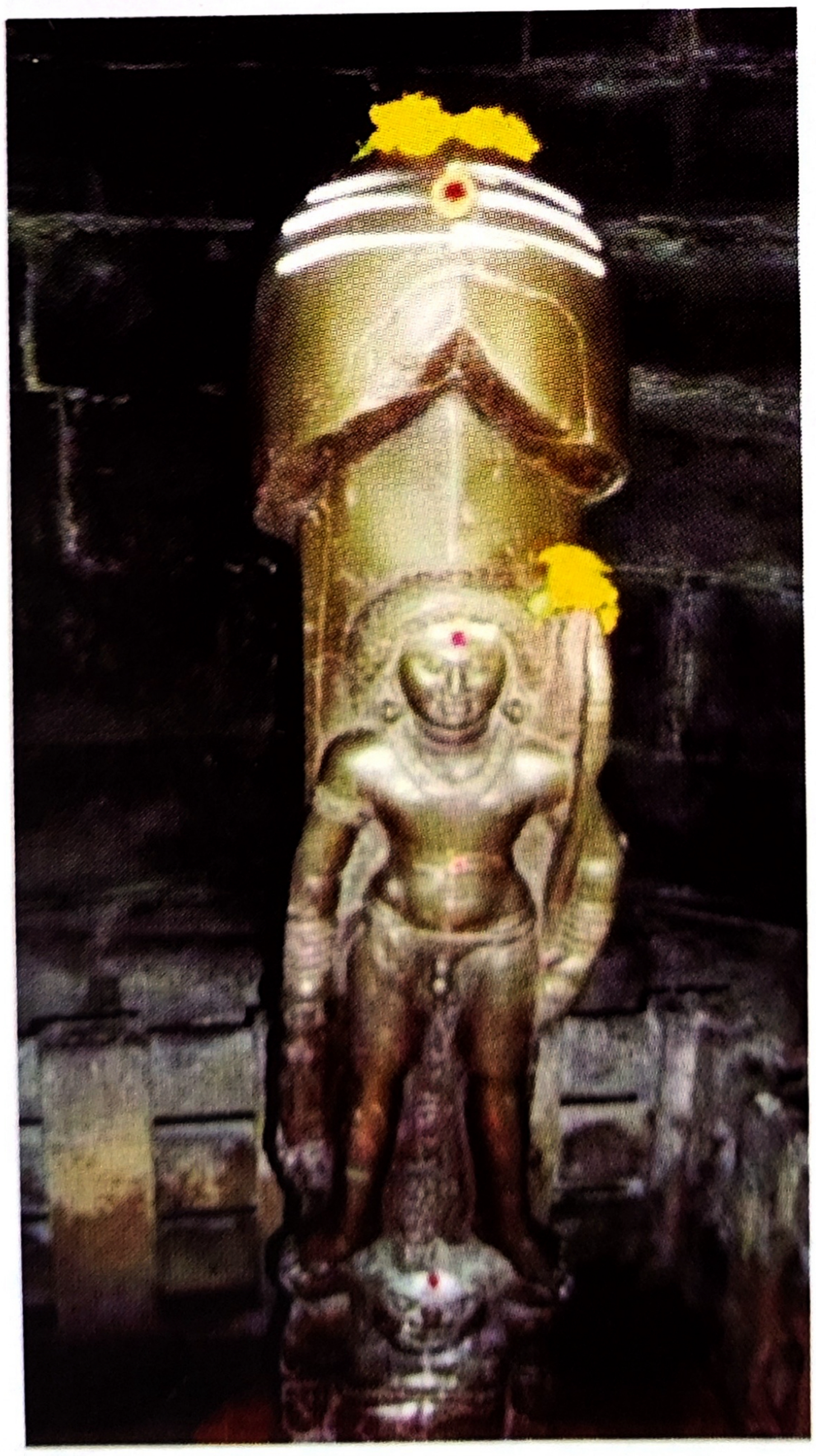
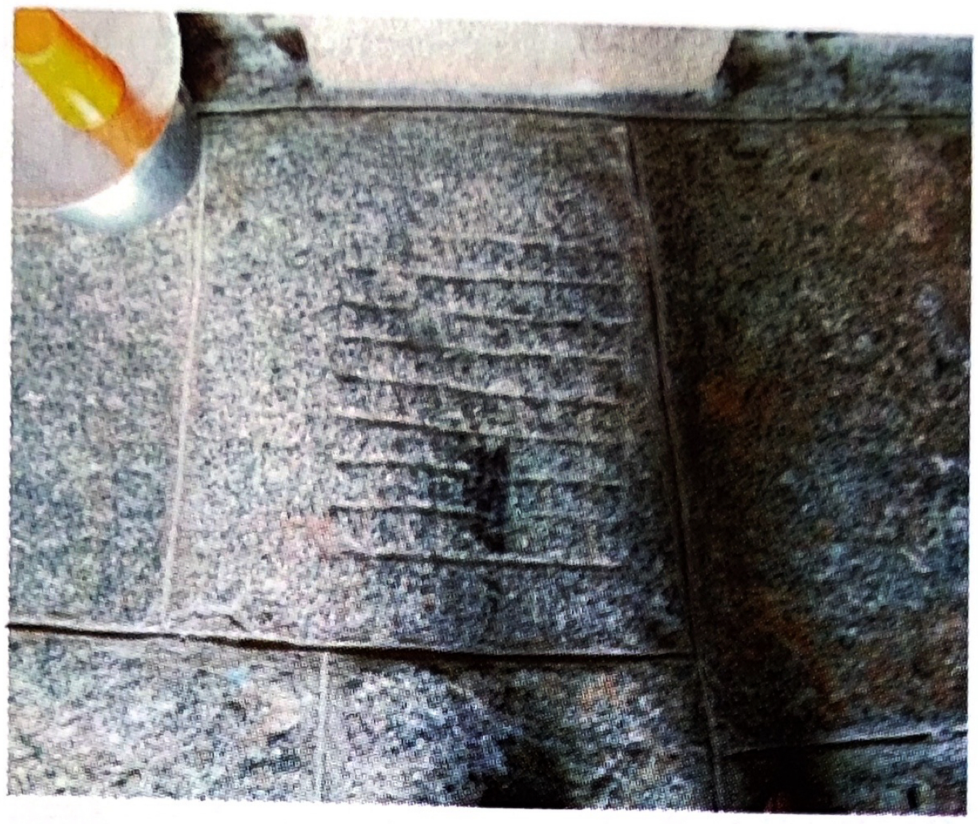


Fig. 8 & 9: Shiva Linga datable to 2nd/3rd century BC.on the right side and this is supposed to be the earliest Linga in India. There is image of another deity in the temple on the left side.A survey of the temple complex reveals the presence of drawings of chess, dhadi and pachisi games on the floor (Fig.10, 11 & 12). It is difficult to say when these games were drawn in stone but the worn out looks of these games indicates that they were present for a very long time. It is also known that the temple was renovated few decades ago after it was deserted for a very long time.

Fig.10: 64 square game of chess on the floor of the temple.



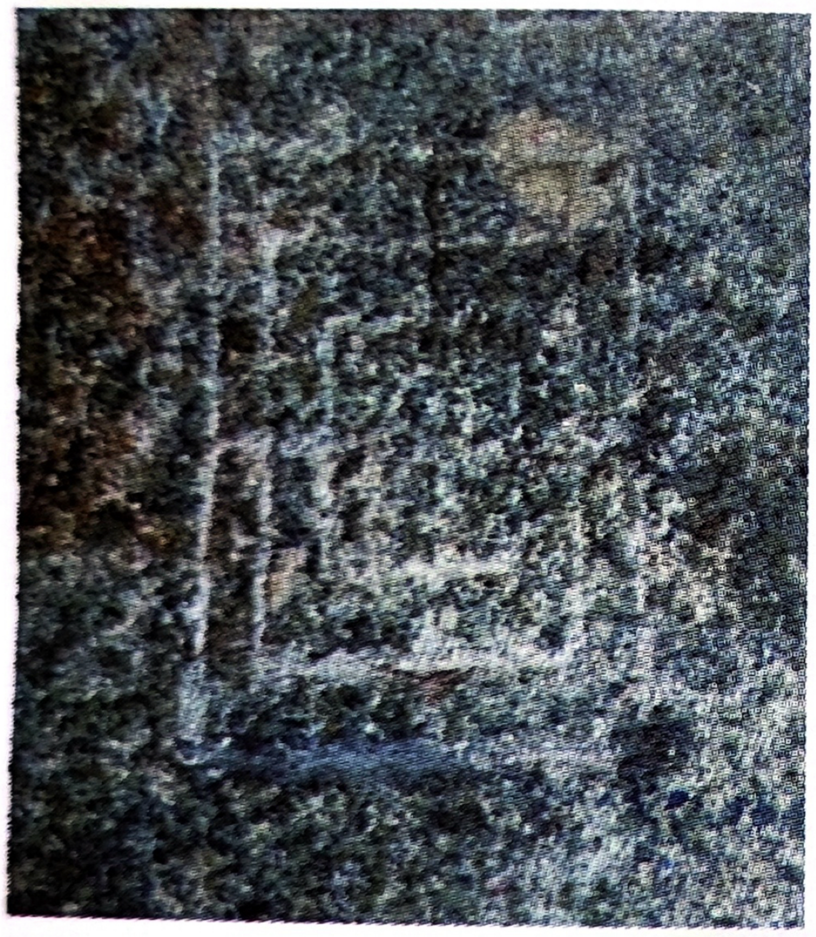


Fig.11: The design of Dhadi game in Gudimallam temple. Dhadi in Telugu literally means attack and this game is depicted in temples and forts suggesting that this must have been very popular in earlier times.

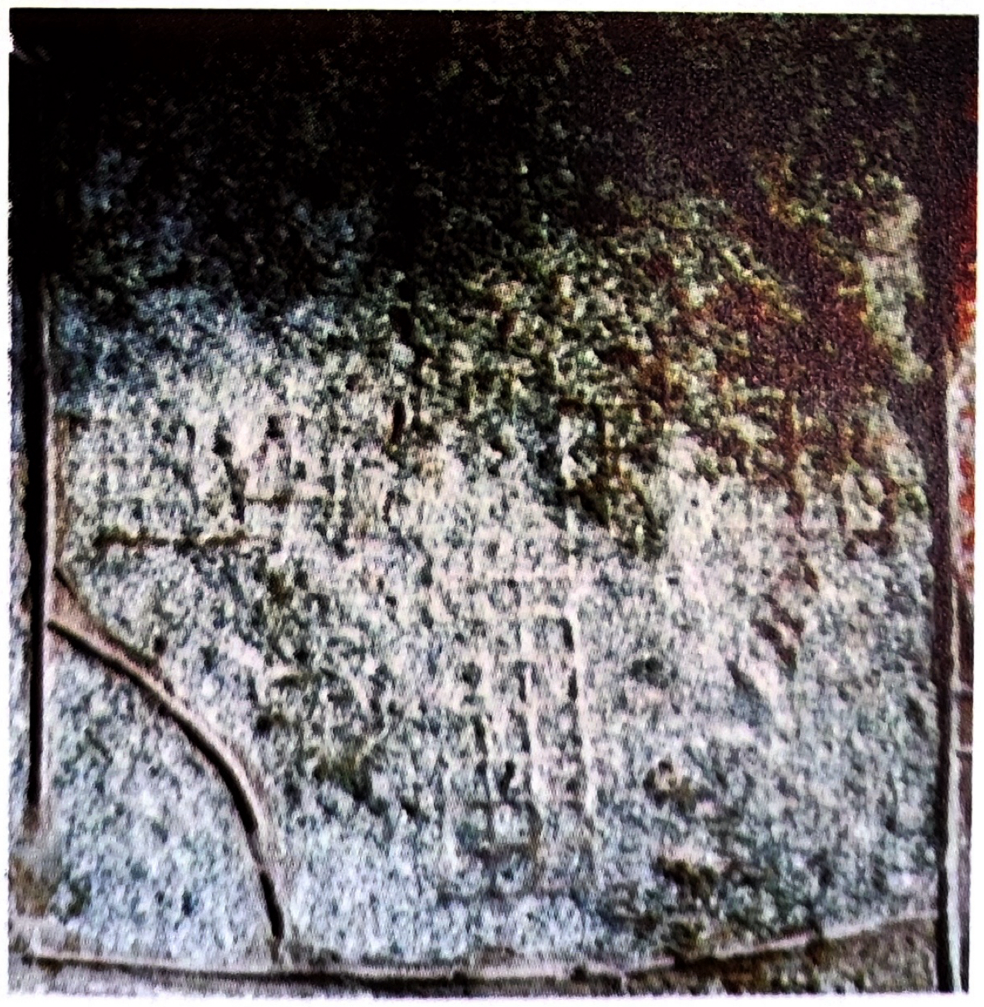


Fig.12: Pachisi game: Typical design of the game in the floor of the temple.

2. Govindarajaswamy temple in Tirupati (79.42E. Long; 13.65N. Lat):

This is one of the three popular ancient Hindu temples in the holy city of Tirupati and Tirumala in Chittoor district of Andhra Pradesh (Fig.13). Thereare 1060 stone inscriptions in these temples to prove their antiquity and of these 340 stone inscriptions are located in the Govindarajaswamy temple complex alone. The inscriptions belong mostly to the kings of the Pallava (2nd-9th century AD) and the Vijayanagara (1336-1646 AD) that prove that it is an ancient temple. There are both the drawings of many types of board games both known and unknown. The board games are listed below.

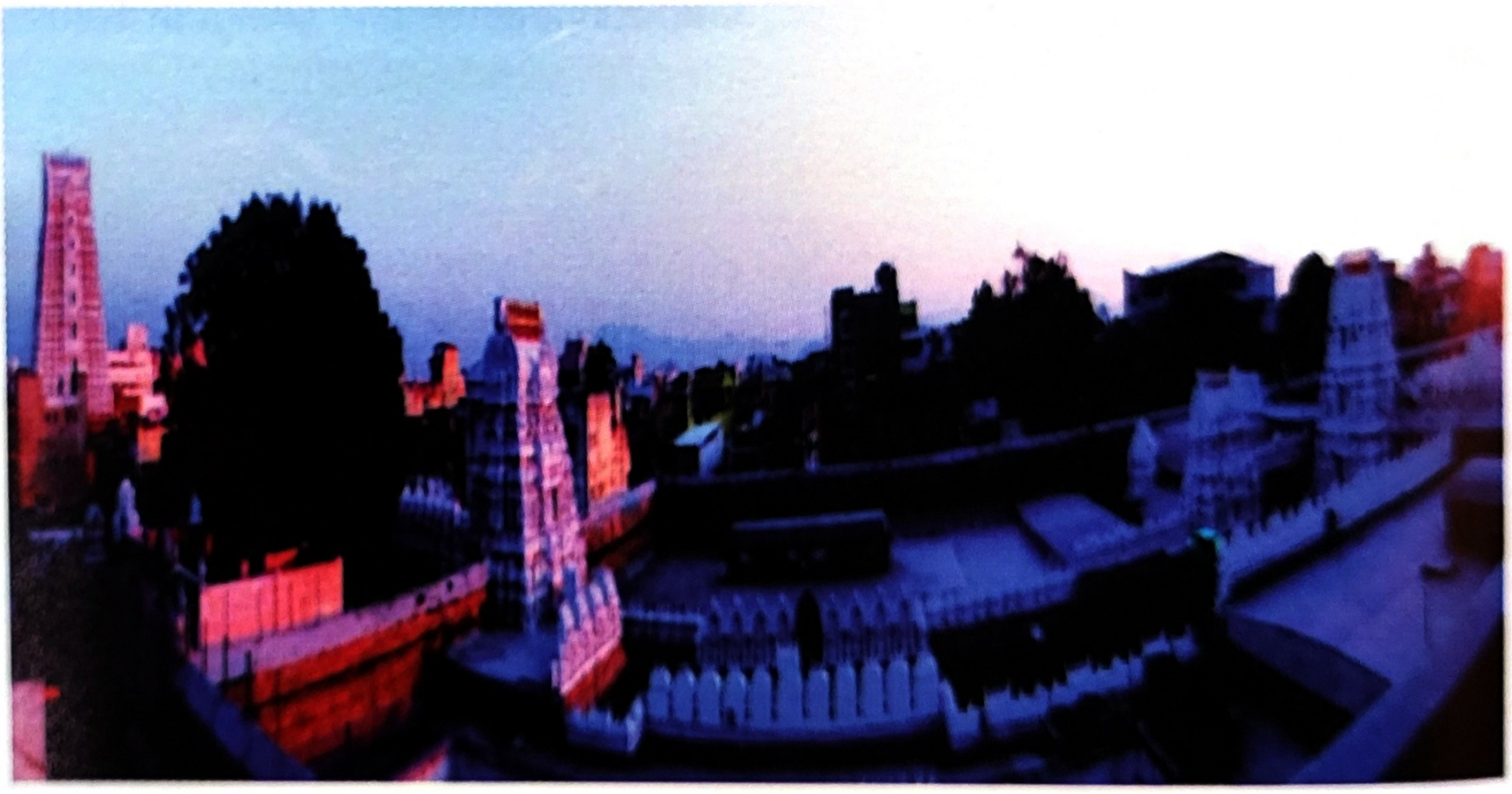


Fig.13: Huge ancient temple complex of Lord Govindarajaswamy at Tirupati

a). Tiger and goat game (Fig.14, 15 & 16): Three different designs of tiger and goat games drawn at different sites in the temple complex. This is basically a game between tigers and goats and there are variations in different types of this game depending upon the number of tigers and goats. The number of tigers varies between 1 and 4 and similarly goat numbers range from 15-24. Designs of the game vary and the type shown in two figures 9 &10 appears to be very popular in Nepal where it is considered this as their national game.

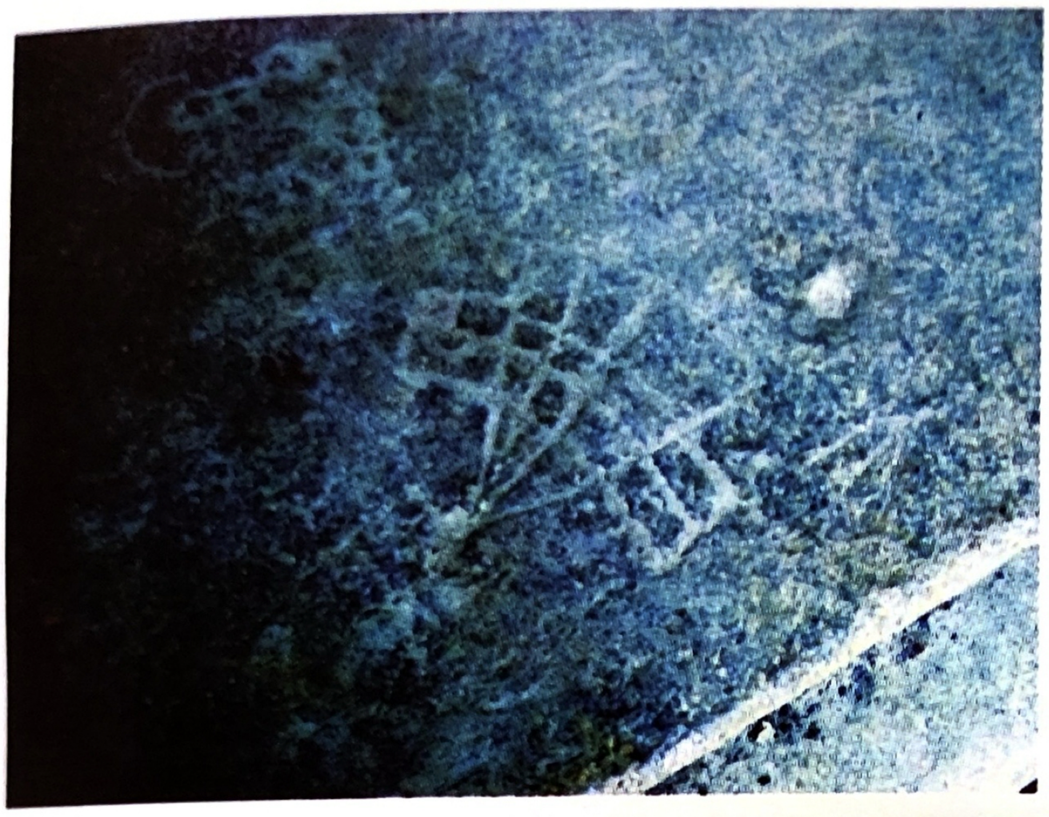


Fig.14: Design of tiger and goats game

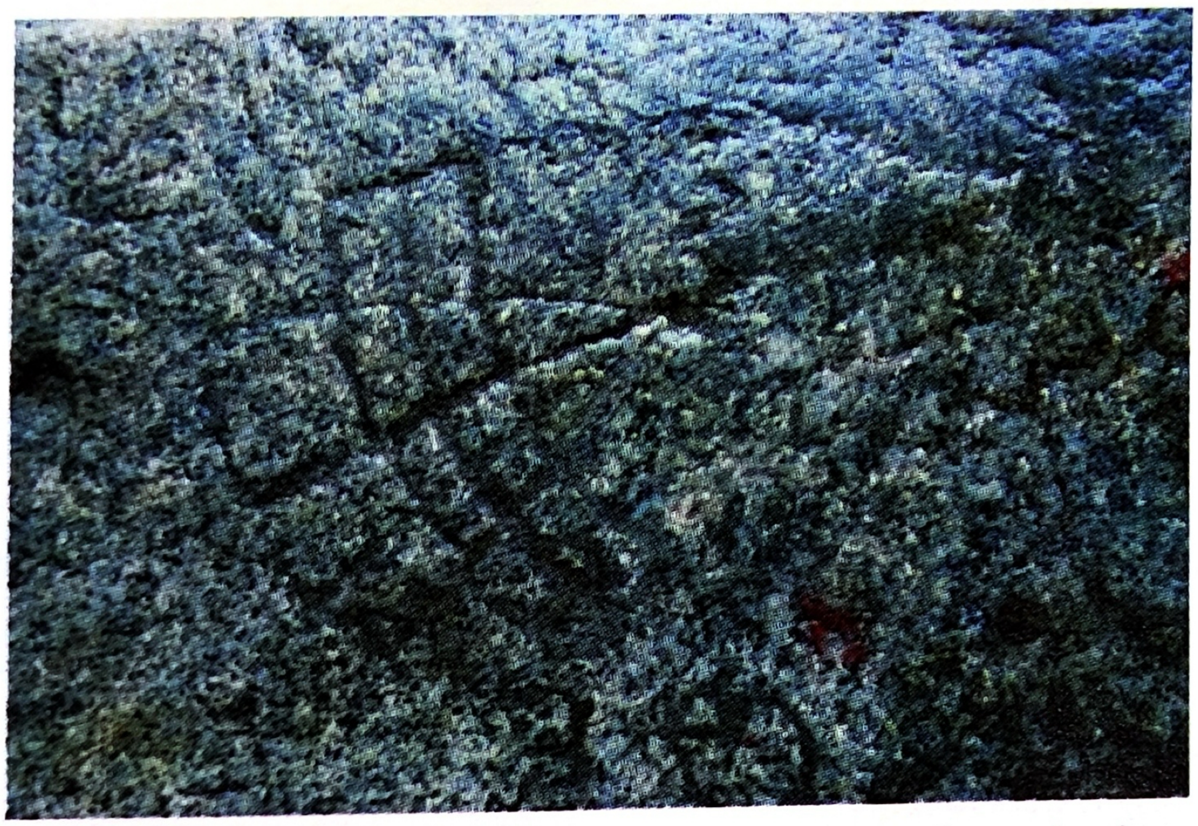


Fig.15: Another design of the game

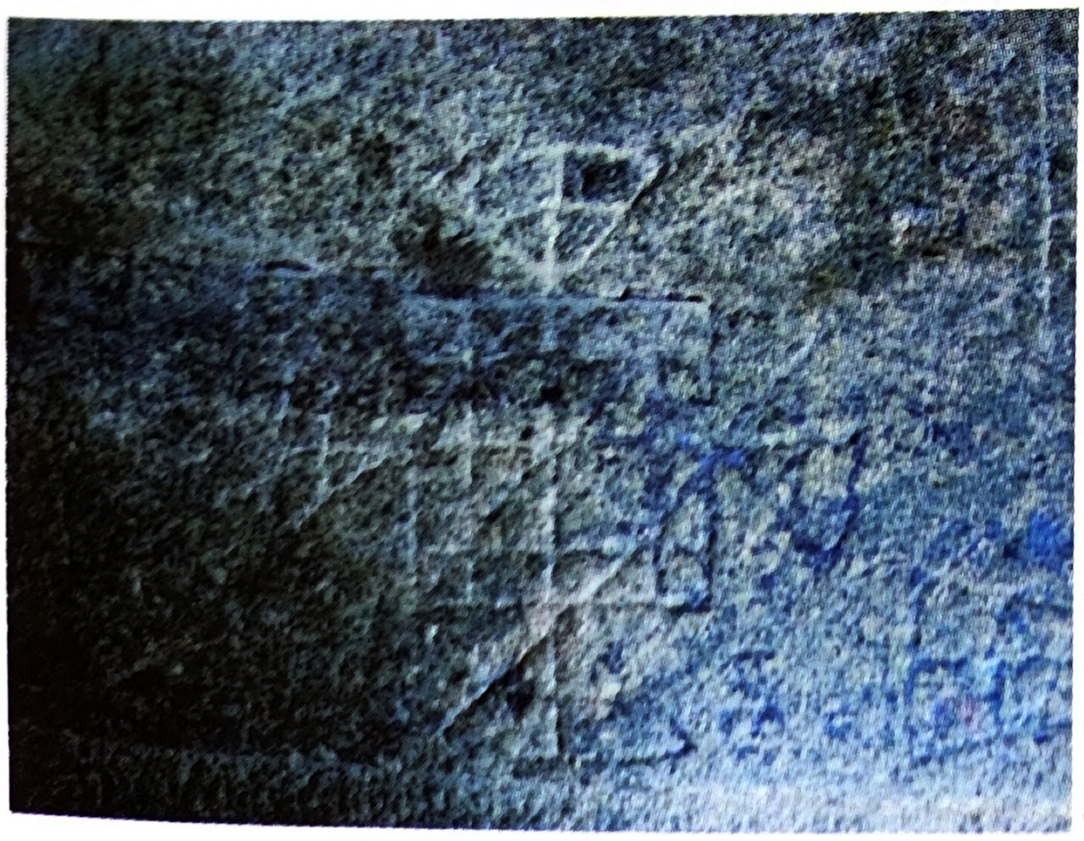


Fig.16: Another design of Tiger and goats game. More elaborate than the two designs shown in earlier figures. Even more complex designs of this game have been described in ancient Indian texts and they are shown in a subsequent chapter on Tiger and goat games.

b).Pachisi game: This game was drawn on many areas of the large temple complex (Fig.17).

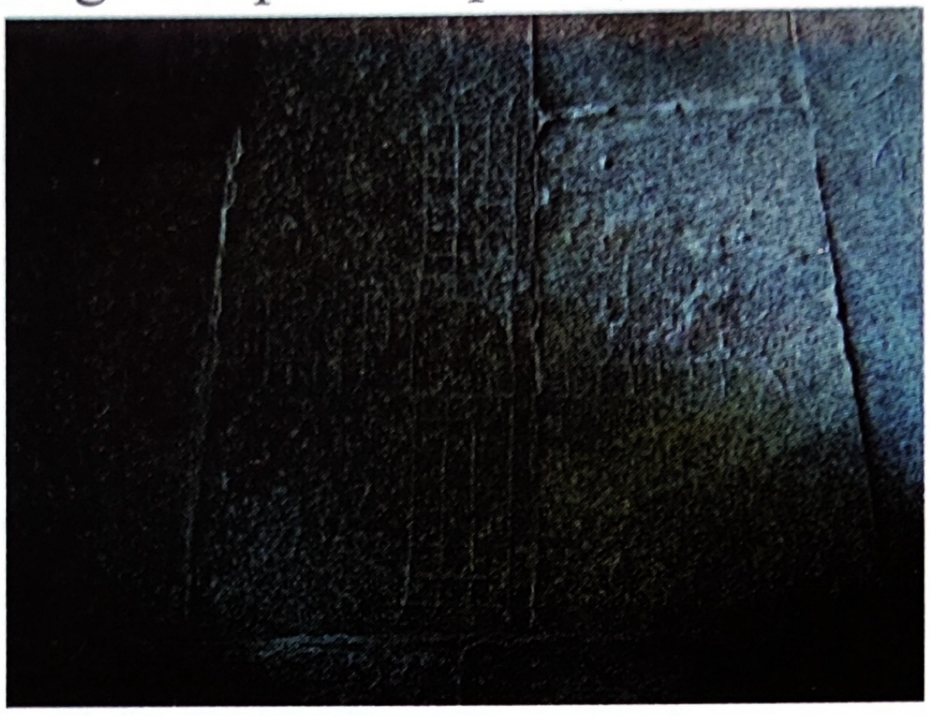


Fig.17: Pachisi game

In this temple complex there are designs of other board games that could not be identified at present time.

c). Unknown board games (Fig.18, 19):

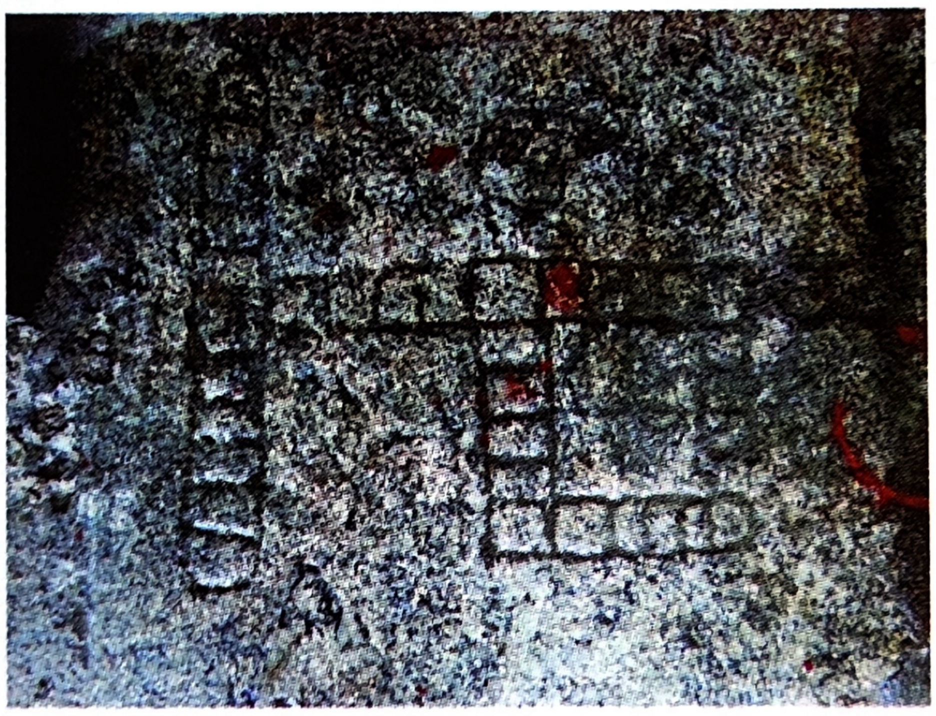


Fig.18: A complex design made of squares.

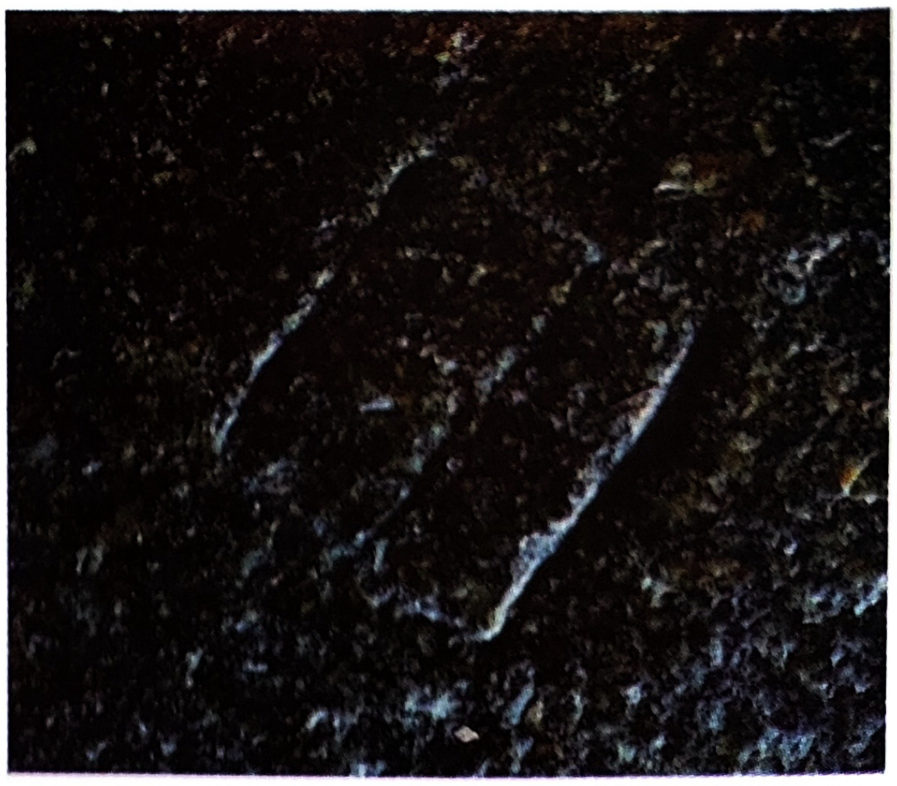


Fig.19: Design of a square, which is divided.

Other temples:

Most ancient Indian temples have designs of the board games played in earlier years and most of them depict pachisi, chess, dhadi etc. Some of these were popular games in this part of the world. These were the games, which can easily be drawn and played. Snakes and ladders game was popular in rural areas but drawing of this game is difficult and its design is not noticed either in temples or forts.

Ancient forts

Forts denote defense and offer protection and security to the rulers and their subjects. Forts are used for offensive and defensive purposes and during medieval period defense was the predominant characteristic feature of forts. These are of many types of forts and some of them enclose towns and cities inhabited by thousands of people. Naturally people need avenues for entertainment as well as games and one could witness the designs of ancient board games in ancient forts.

1. **Rachakonda** (78.50 E.Longitude & 17.11 N.Lattitude)

Rachakonda fort is about 40 kilometers from Hyderabad city in Nalgonda district of Andhra Pradesh and it, is a typical example of medieval Indian fort. Rachakonda was the capital city of Padma Nayak Velama kings who ruled during the 14th and 15th centuries. This fort witnessed many battles with neighboring states and ultimately it came under the Muslim Bahmani dynasty in 1433 AD. Kapileshwara Gajapati of Kalinga seized this fort in 1458 AD but the fort: did not stay long in their hands and no subsequent kings ruled from this place. The capital of Bahmani kings was Bidar, which was also known as Muhammadabad. One of the entrances to the Rachakonda fort is seen in the photograph below (Fig.20).

Fig.20: One of the entrances to the Rachakonda fort which witnessed the glorious days in the 14th and 15th centuries and deserted after that time.

The drawing of the Pachisi game is present in front of the king's palace in the Rachakonda fort (Fig.21). The dhadi game is marked near the main gate of the fort (Fig.21).

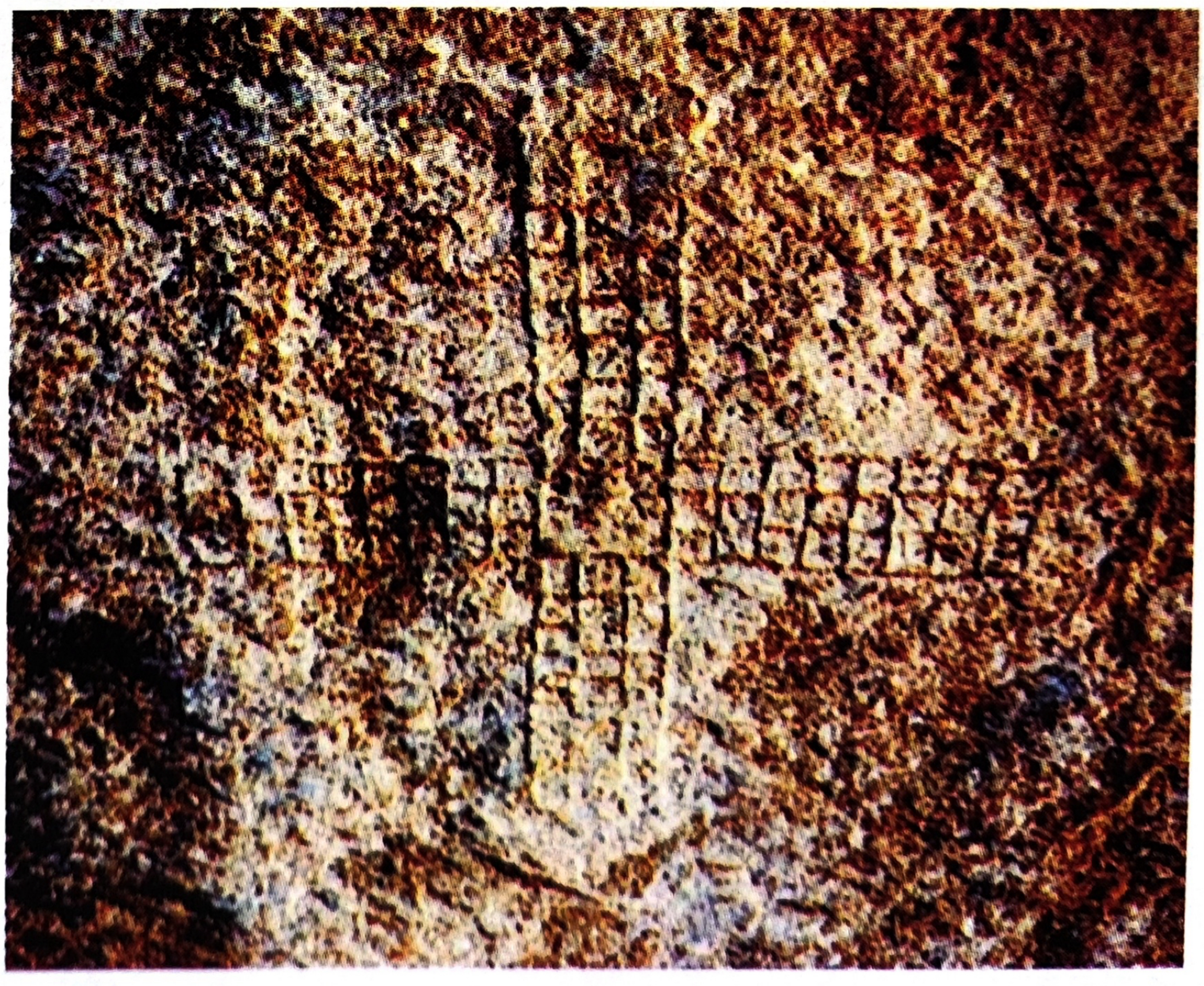


Fig.21: Pachisi game depicted in the fort complex.

Fig.22: Dhadi game board in Rachakonda fort complex.

2. Devarakonda fort (77-51 E. long & 16-37 N. lat).

Both Rachakonda and Devarakonda forts are in Nalgonda district of Andhra Pradesh and they were the capitals of Velama kings and they have seen their hay days in 14-15 th centuries AD and after their capture by Bahmanis in the early 15th century no kings lived in these forts and they were deserted.Their emblem is seen in these forts (Fig.23)

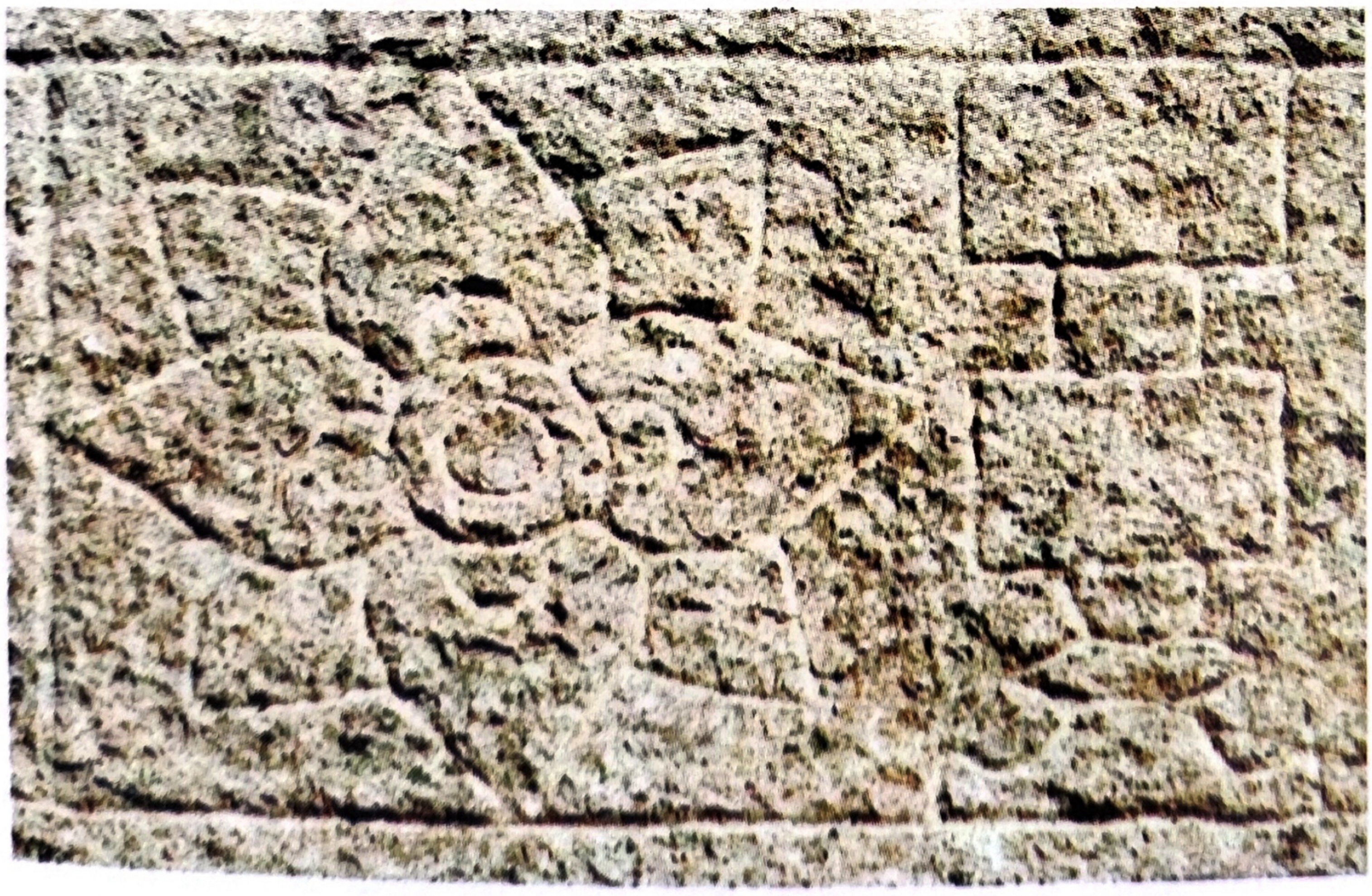


Fig.23: Padma Nayaka emblem in the Devarakonda fort.

The design of tiger and goats game is seen in many places of this fort (Fig.24).

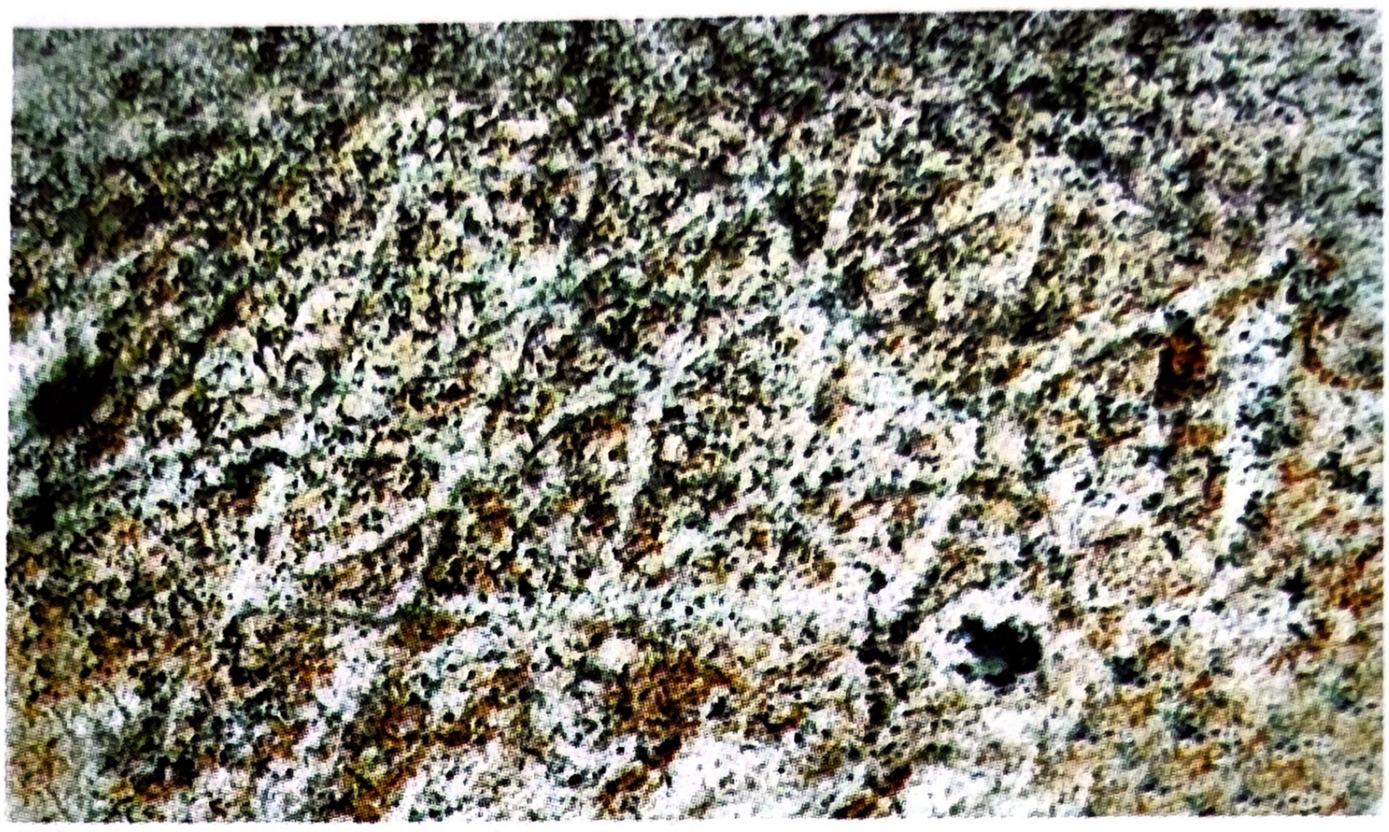


Fig.24: Design of Puli –Judam in the Devarakonda fort.
(Tiger and goat game)

3. **Gandikota Fort** (78.22 E. Long; 14.49 N. Lat)

Gandikota was an important medieval fort in Kadapa district. Built in 12th century AD it was under Kakatiyas, Vijayanagar dynasty and later came successively under Qutb Shahis and Asaf Jahis (Fig.25). It was on ancient trade route

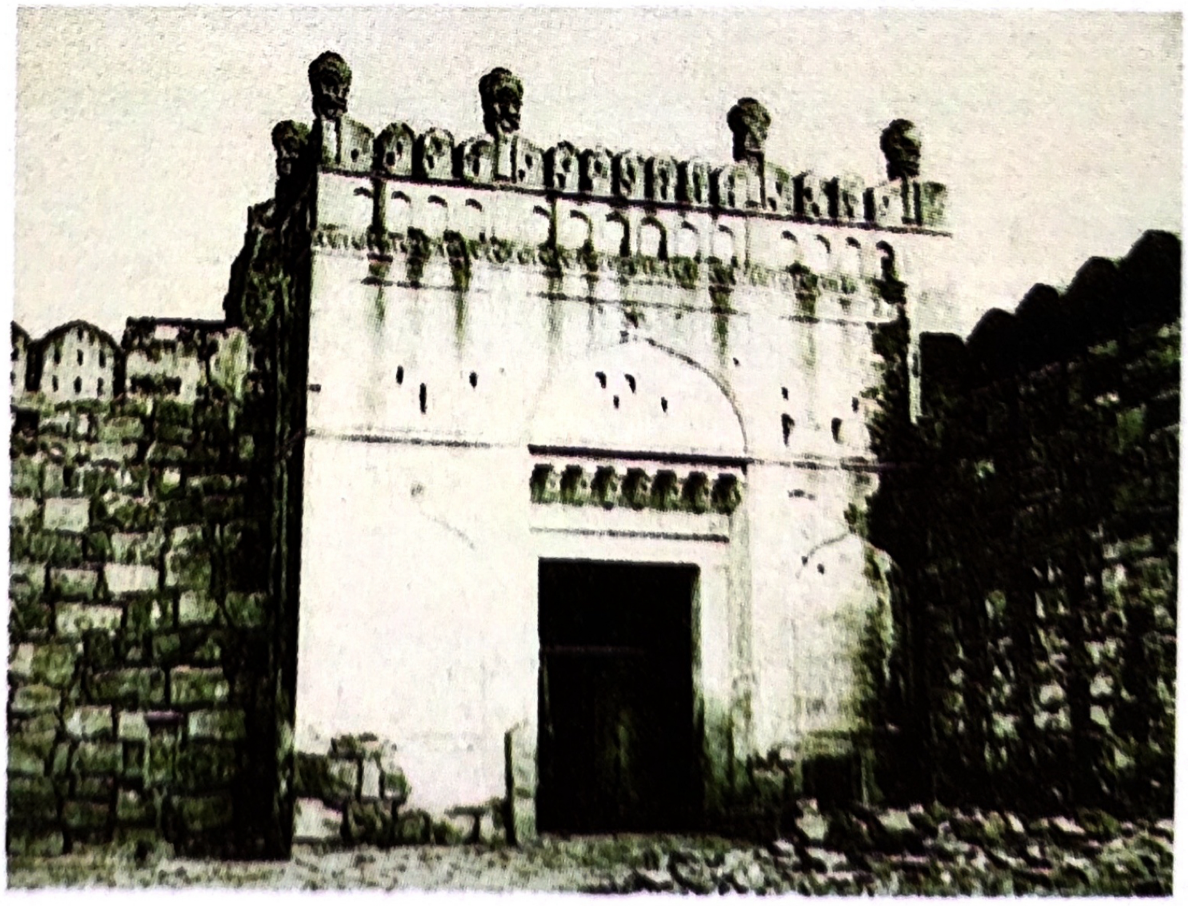


Fig.25: One of the main gates of Gandikota fort in central India. This fort is on the banks of a river and was under the rule of both Hindu and Muslim dynasties which ruled deccan of central India.

and was visited by Travernier in the 17th century.This fort has a masjid and two Hindu temples dedicated to Madhava and Raghunatha. It also has a large granary.Chess game design was recorded in this medieval fort (Fig.26).

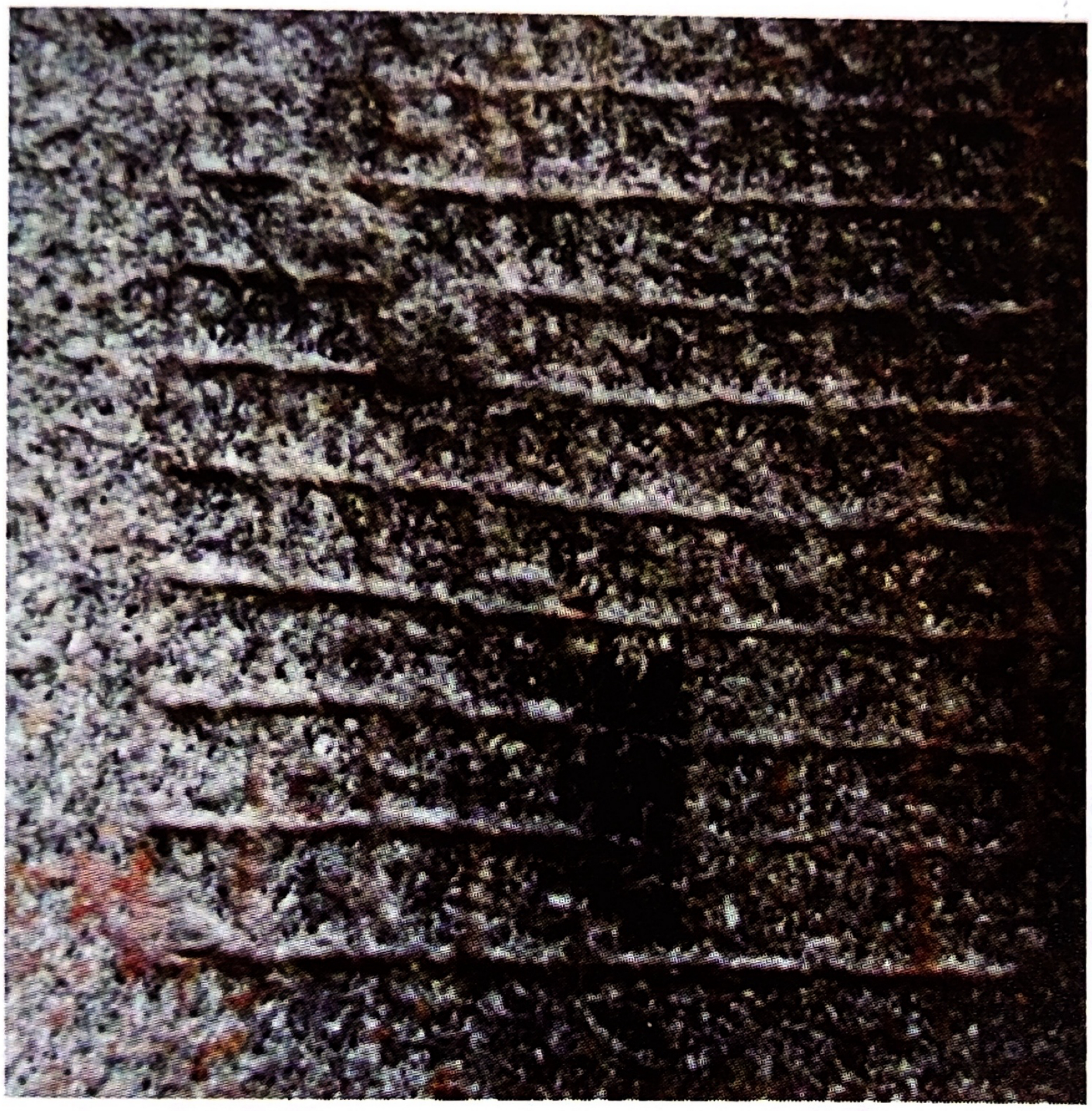


Fig.26: Chess game design in Gandikota fort.

4. **Fatehpur Sikri fort** (77* E.Long; 26 N.lat)

This fort is UNESCO World Heritage Site and was built by Mughal Emperor Muhammad Jalaluddin Akbar (1542-1605 AD) which became his second capital. This is a magnificient palace built by the locally available red sandstone. The construction was started in 1569 and it lasted 15 years it was the capital of Mughal empire from AD 1571-1585. This fort was abandened by Akbar because of water scarcity and his capital was shifted to nearby Agra. In the courtyard of the palace there is a large design of the pachisi game in the typical shape with castles. It was said that Akbar was fond of this game and he used to sit in the centre and the pieces were not the wooden one but the women from the harem which was nearby. This was typical of the medieval days of kings and emperors (Fig. 27, 28, 29, 30 & 31).

Fig.27: Fatehpur Sikri fort

Fig.28: Fatehpur Sikri fort

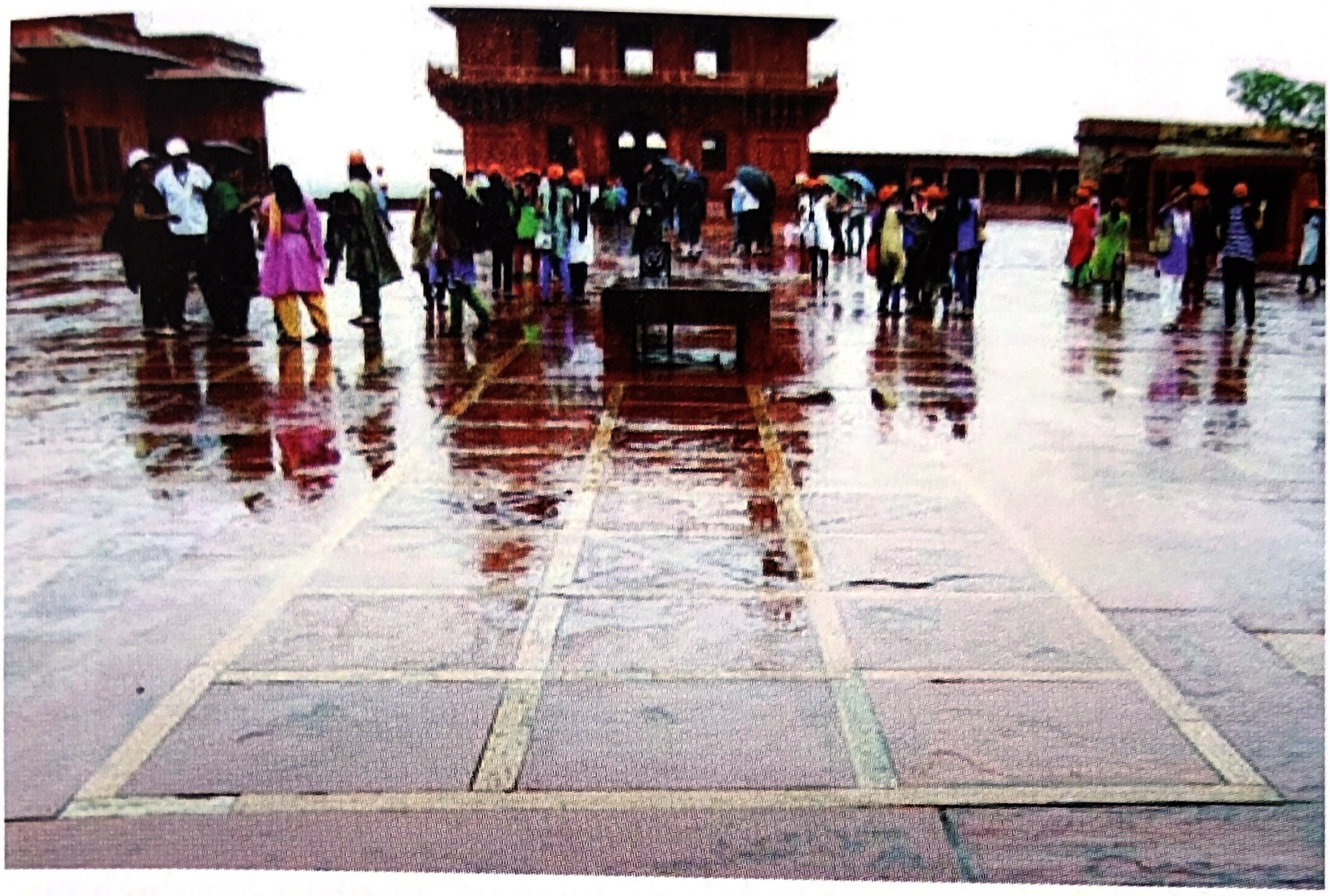


Fig.29: One part of the pachisi with central elevated area where Emperor Akbar was said to be sitting while playing the game. Akbar would toss the shells. 16 women from his harem wearing player's colors were the pieces and they moved the way he told them. It is said that Akbar took such a fancy to pachisi that he had a court for this game constructed in all his palaces such as those at Agra and Allahabad.

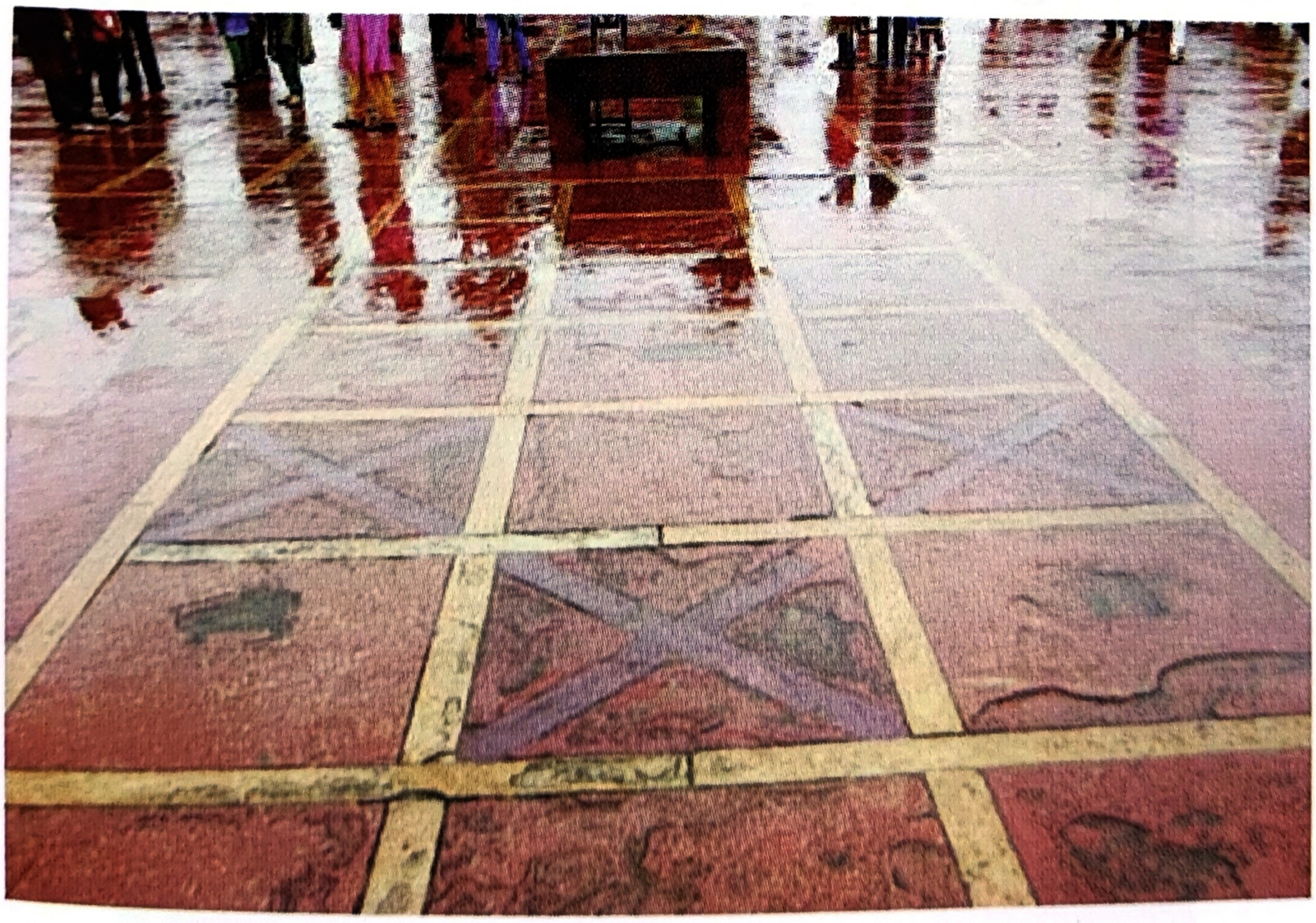


Fig.30: Part of pachisi game. The castle markings are seen clearly.

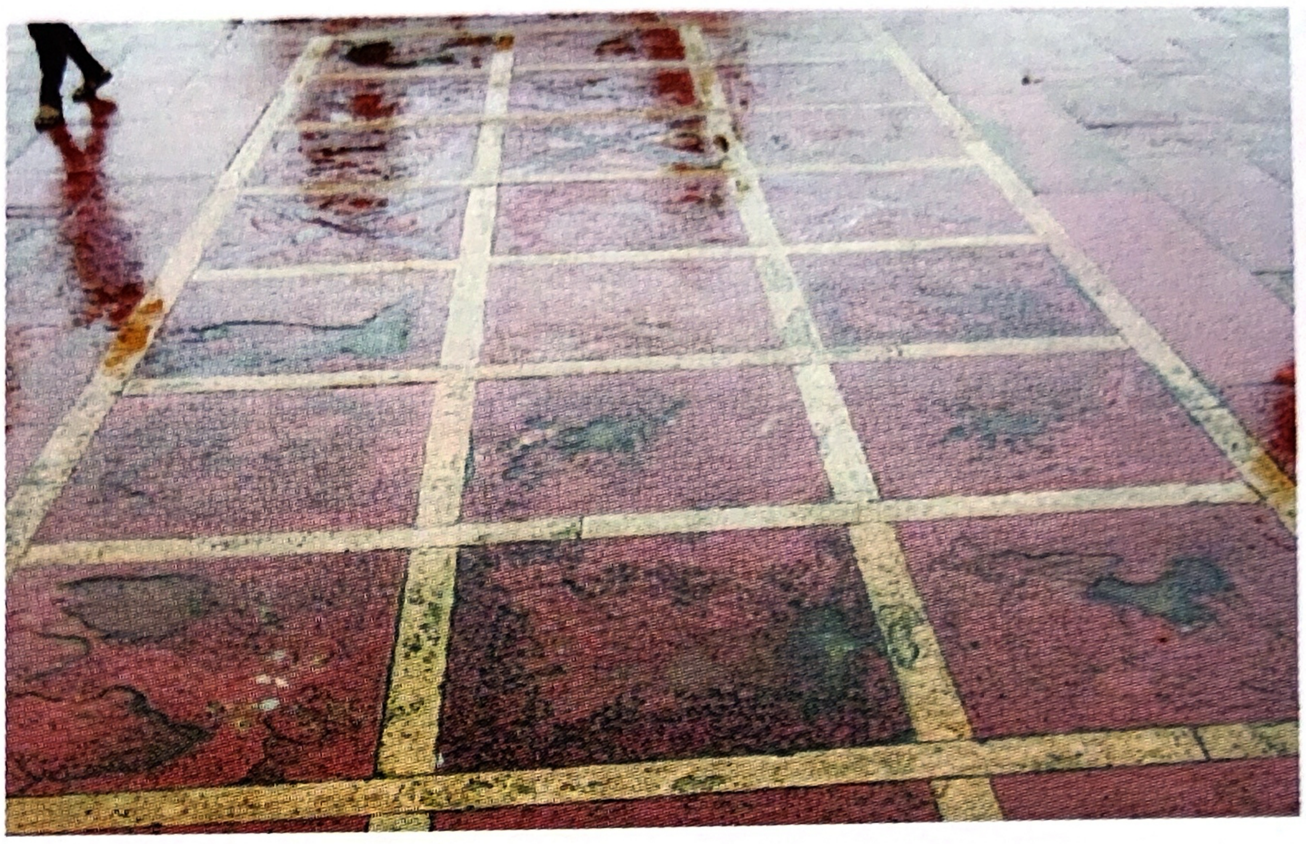


Fig.31: a closure look of the squares and castles of the pachisi game.

5. **Medak fort** (78.9 N. Lat; E.long-16.34)

Medak fort is in Medak district of Andhra Pradesh and is about 100 kilometers north of Hyderabad (Fig.32). This was built during Kakatiya period during 12th century. It later came under Qutb Shahis and their territory was divided into 19 Circars and each had a fort. Medak was one of the Circars with 16 Paraganas under it. The design of an unknown board game is evident in this fort (Fig.33).

Fig. 32: Medak fort

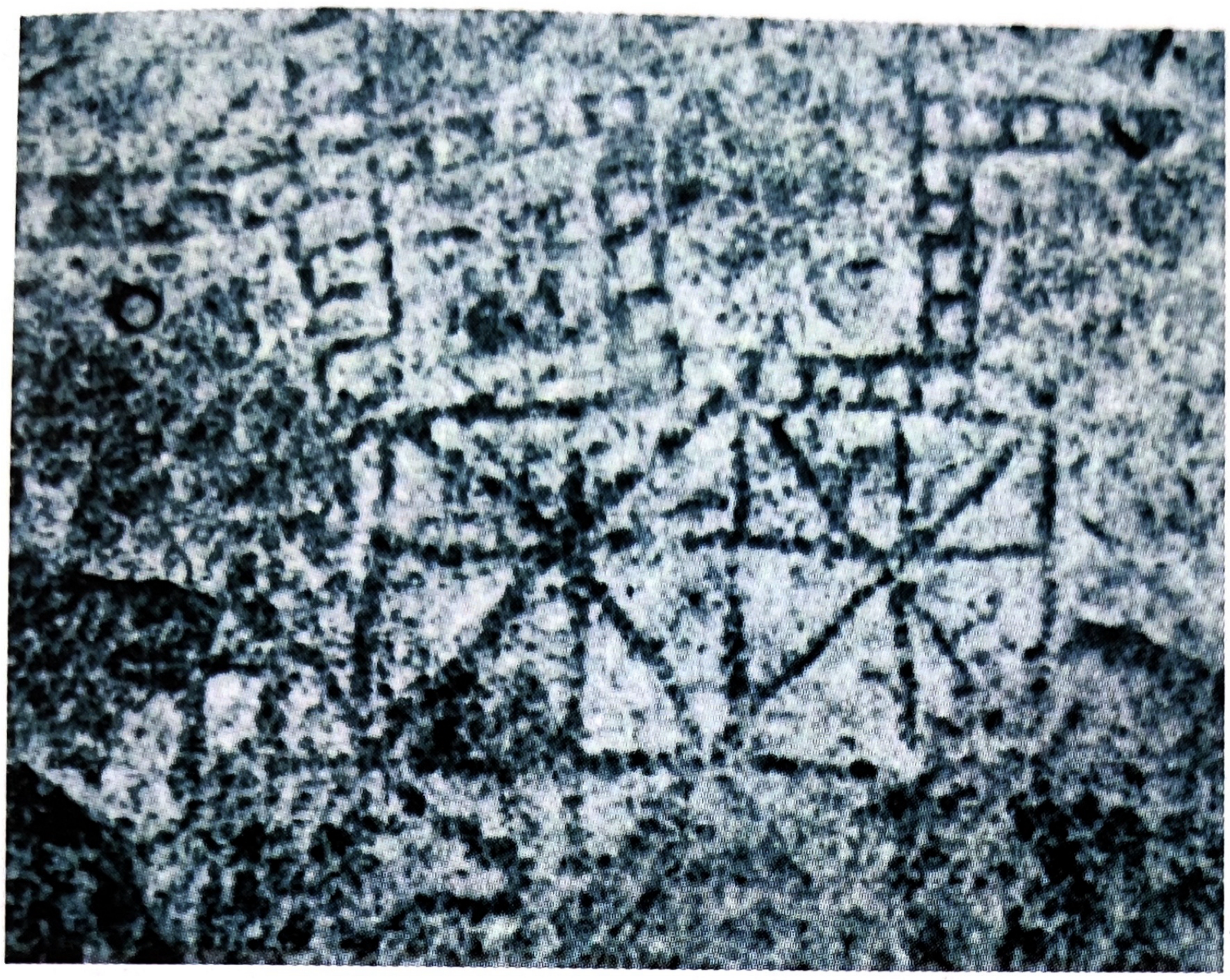


Fig.33: Unknown board game in Medak fort.

6. **Kondaveedu fort** (80.20 E.Long; 16.21 N.Lat)

This fort is located in Kondaveedu village of Guntur district of Andhra Pradesh (Fig.34). It is a hill fortress that

Fig.34: Kondeveedu fort

was built by Prolaya Vema Reddy and ruled by his successors till AD 1424 when it was taken over by Devaraya II of Vijayanagara. Gajapathis of Kalinga occupied it in 1454 AD. It went into the hands of Qutb Shahis who called this as Murtuzanagar. French occupied it in 1752 AD and lastly taken over by the English in 1788 AD. There is a design of an unknown board game in this fort (Fig.35)

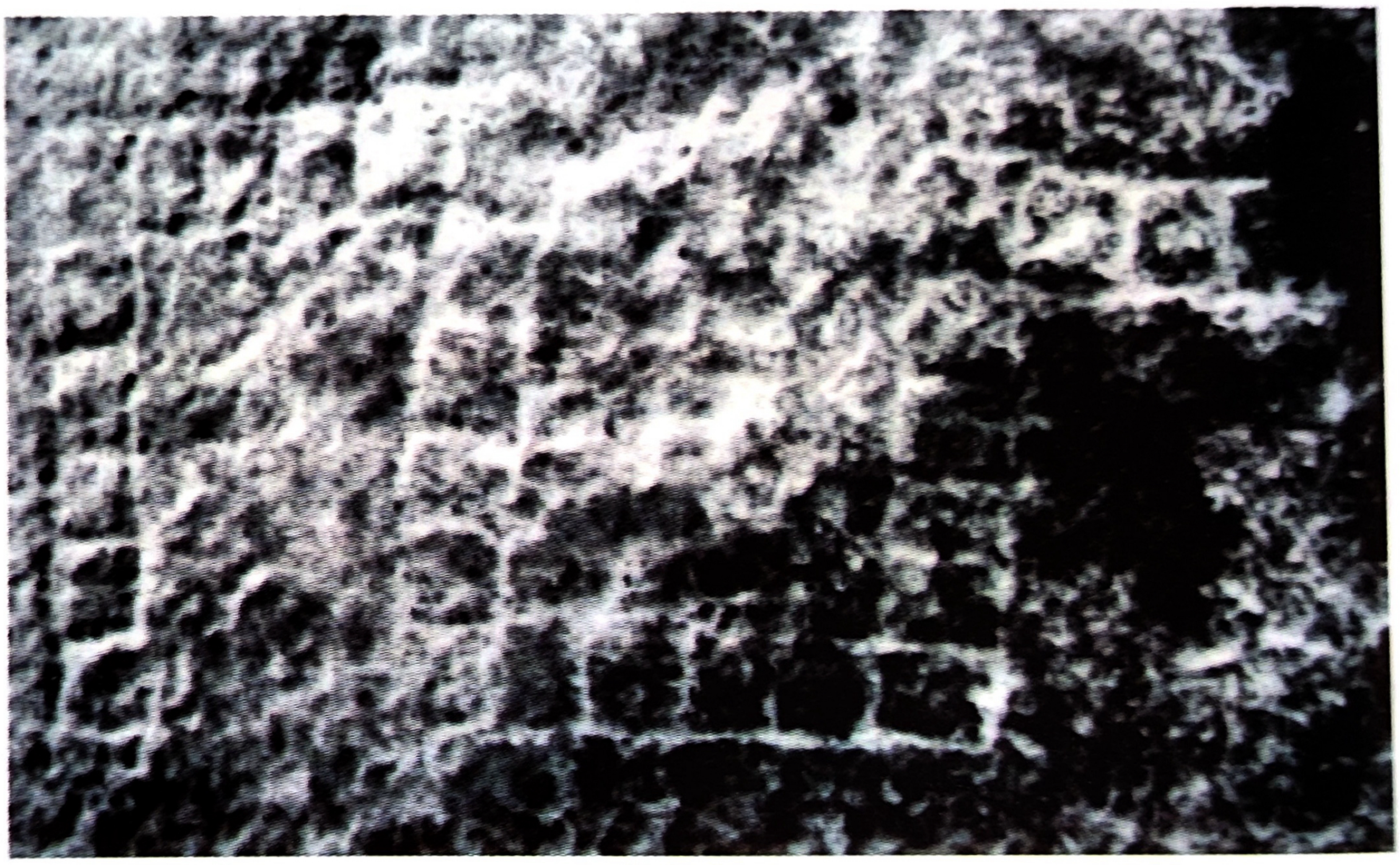


Fig.35: Unknown board game design in Kondaveedu fort.

7. **Undrukonda fort** (77* E. Long; 16 N. Lat)

This fort was built by Kakatiyas and subsequently occupied by Vijayanagaraking Krishnadevaraya in 1518 (AD Fig.36). Later it came under the rule of Bahmanis and Qutb Shahis.There is a design of an unknown board game in this fort (Fig.36).

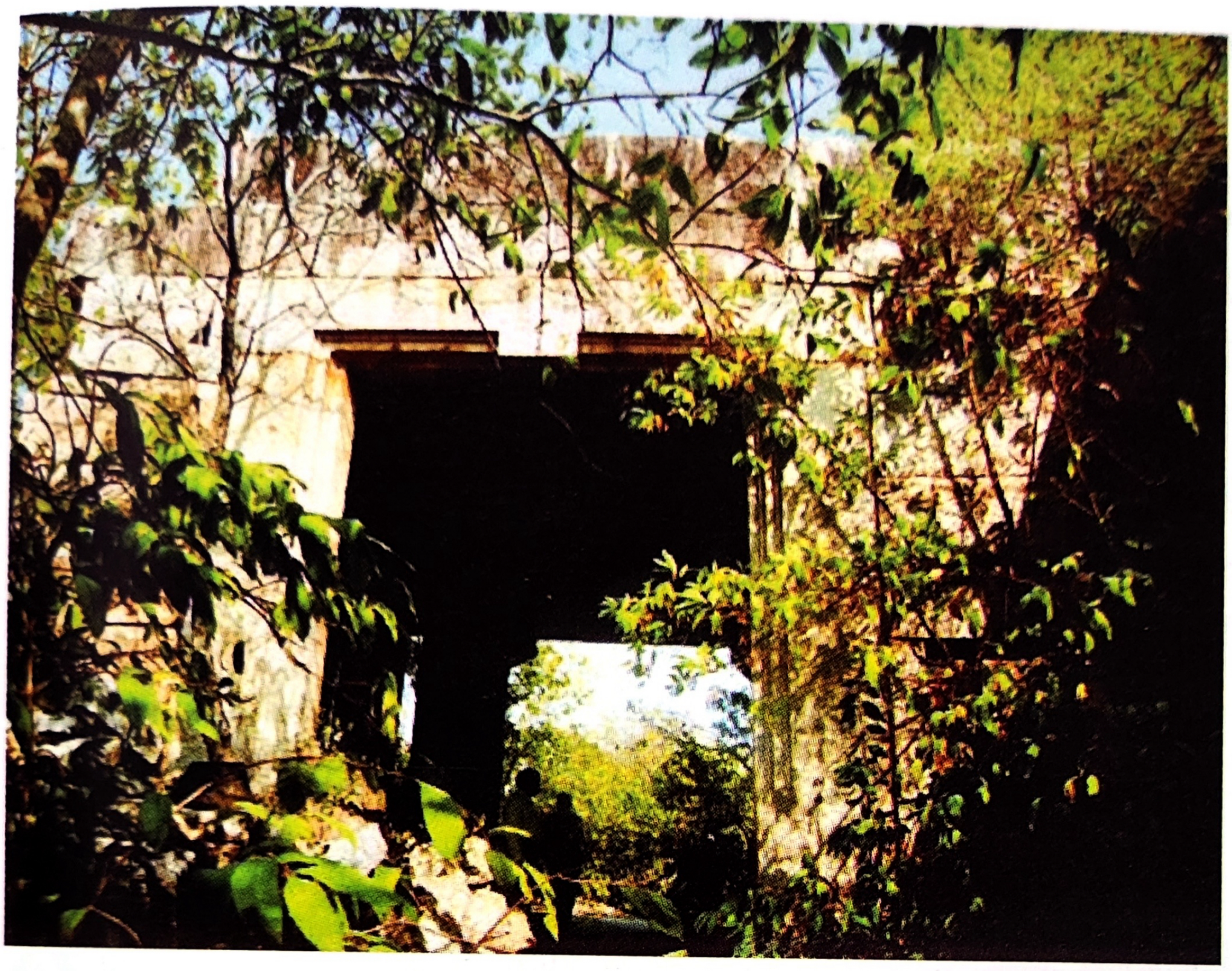


Fig.36: Undrukonda fort

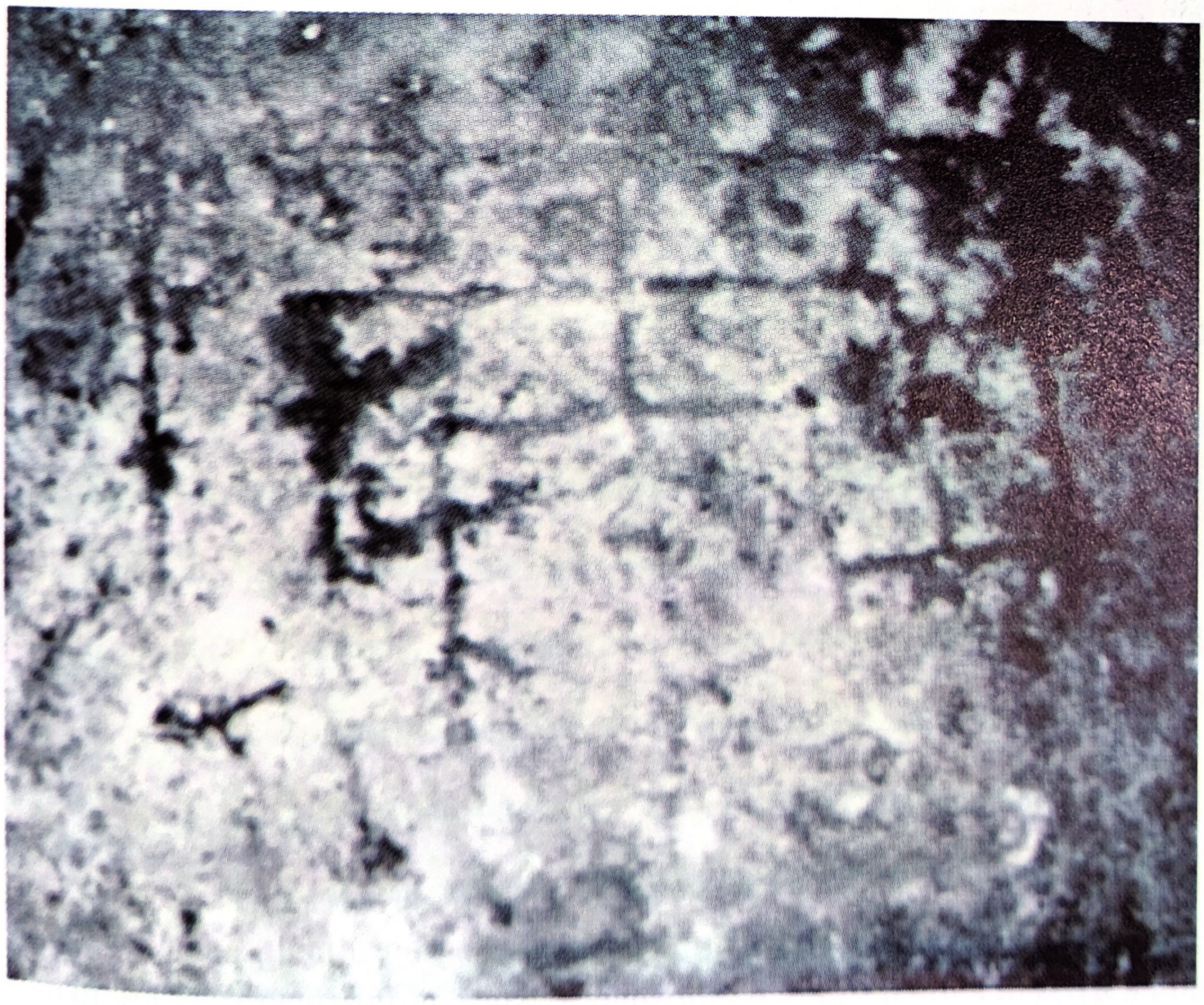


Fig.37: The design of unknown board game in Undrukonda fort

8. Yadgir fort (78 E. Long; 22 N. Lat):

Yadgir fort is a medieval fort near the historic city of Gulbarga that was the capital of Bahmani dynasty that ruled between 14th to 16th Centuries AD. This fort (22* N; 78* E) has images of two unknown ancient board games. One is a kind of maze like of which was described in Indian epic Mahabharata and the second is similar to a game which is seen in other parts of the world like Africa.They are shown below (Fig.38, 39 & 40).

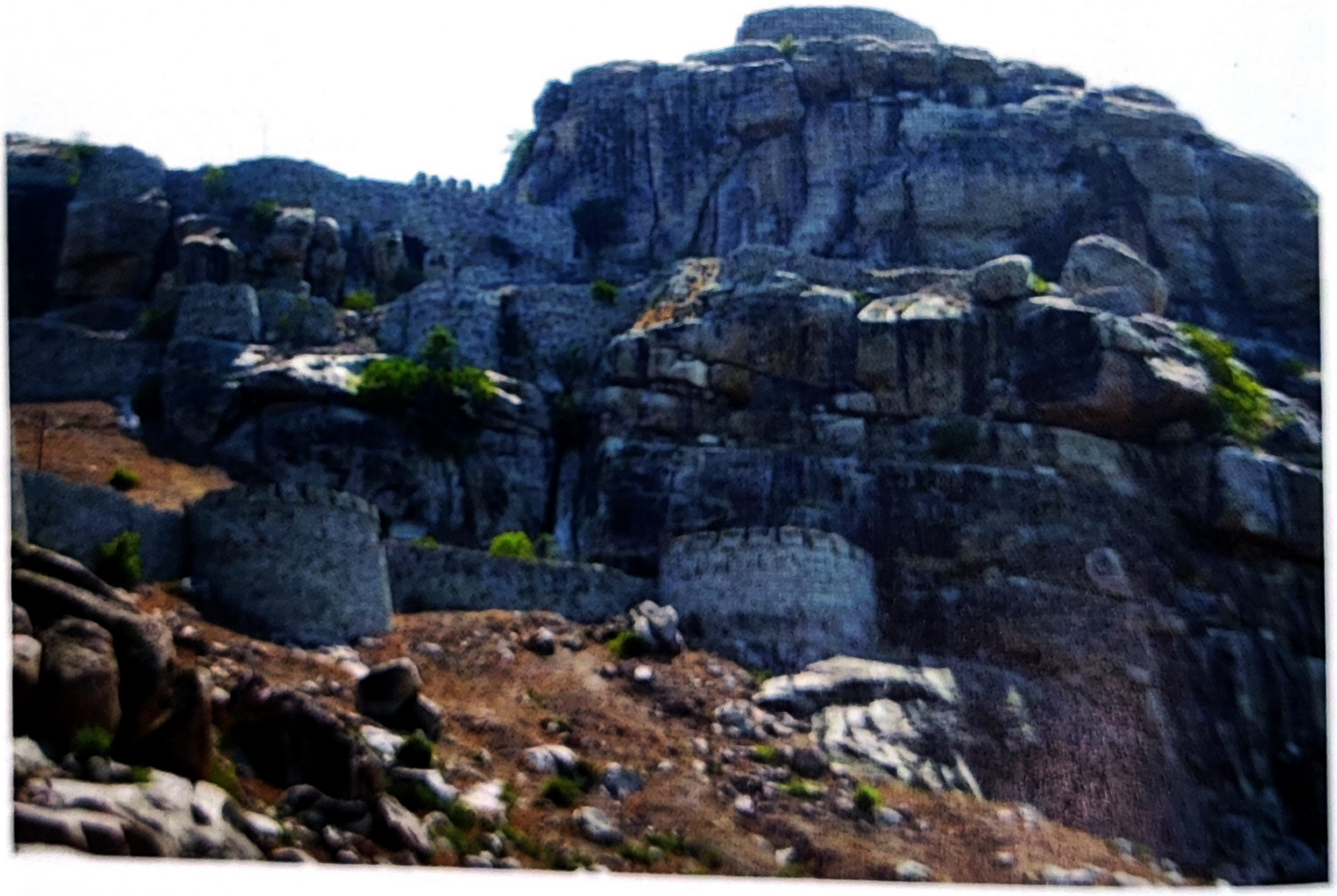


Fig.38: Yadgir fort in Karnataka which witnessed many a battles in the medieval period.

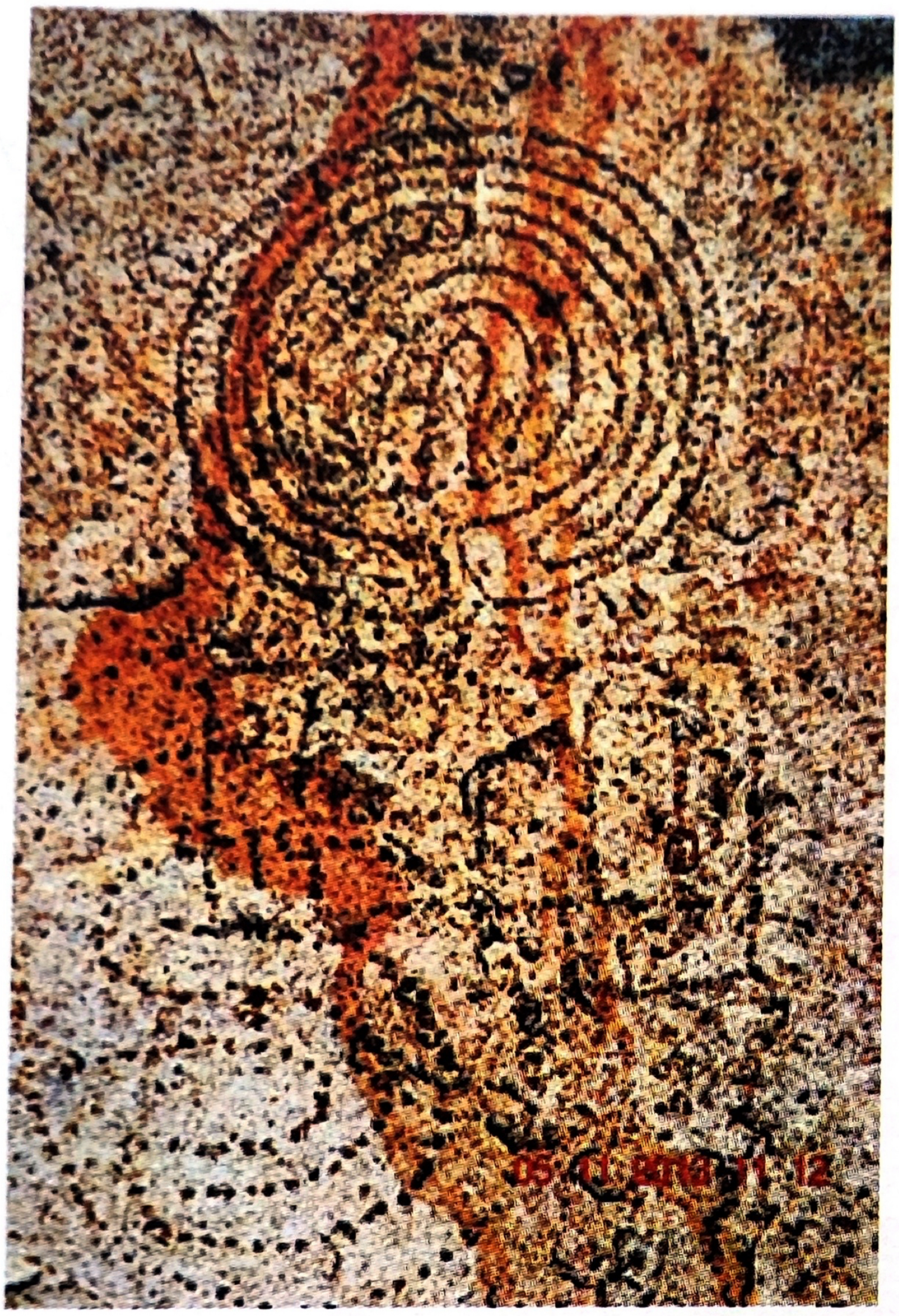


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Fig.39: unknown maze game. Similar mase or labyrinths were discovered in Petra and Nabataeean sites in Middle-East.

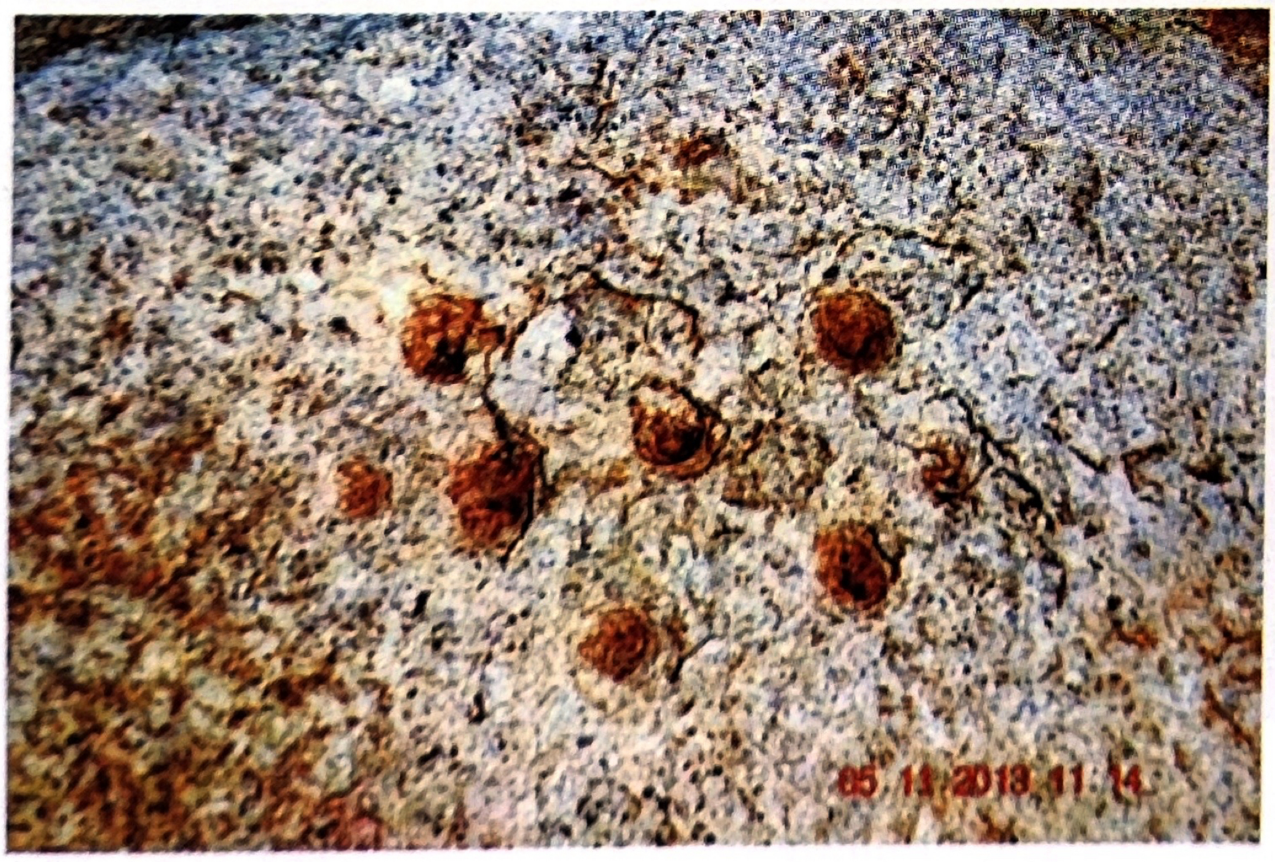

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Fig.40: Wana Guntalu game which are cup-shaped depressions carved out in stones were also found in excavations of ancient sites in Africa and Middle-East.This game was known as Mancala in some parts of the world.

9. Other forts:

An extensive survey of the ancient forts mostly belonging to the medieval period in the Deccan was very revealing (Fig.41). The two common places in those forts where there are drawings of the ancient board games are the places of high security such as the main gates and the fronts of the palaces of the rulers.Invariably in these places the guards got to be alert, they seem to be playing these games.Chess is not commonly seen in such places since this may be considered as game of the intellectuals. Pachisi, Tiger and goats game and dhadi games are more commonly witnessed in the areas of the security guards.

Fig.41: Elgandal fort in Karimnagar district of andhra Pradesh.

2

Pachisi

'Pachisi' is an ancient board game and its very name pachis meaning twenty-five in Hindi confirms its origin from India. It was sometimes called the national game of India (Fig.42, 43). There are references to this type of game in ancient Indian classic Mahabharata. The games antiquity can also be established on the basis of the presence of its drawing on the stones of the ancient forts and temples in the country as noted.

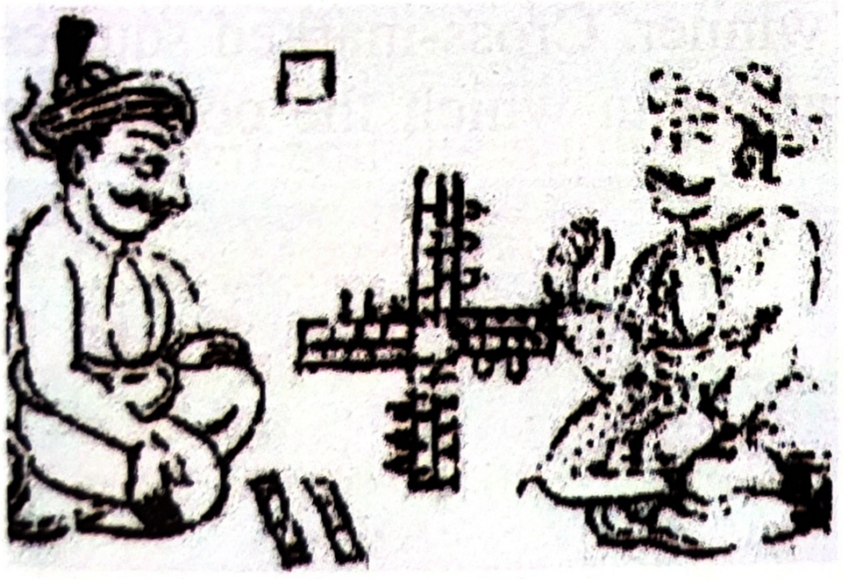

Fig.42: Photo of two players playing the pachisi game. The players seem to be using the Pachikas instead of cowries, which is the practice in recent past. (Sougandhika Parinaya manuscript, 1821 AD)

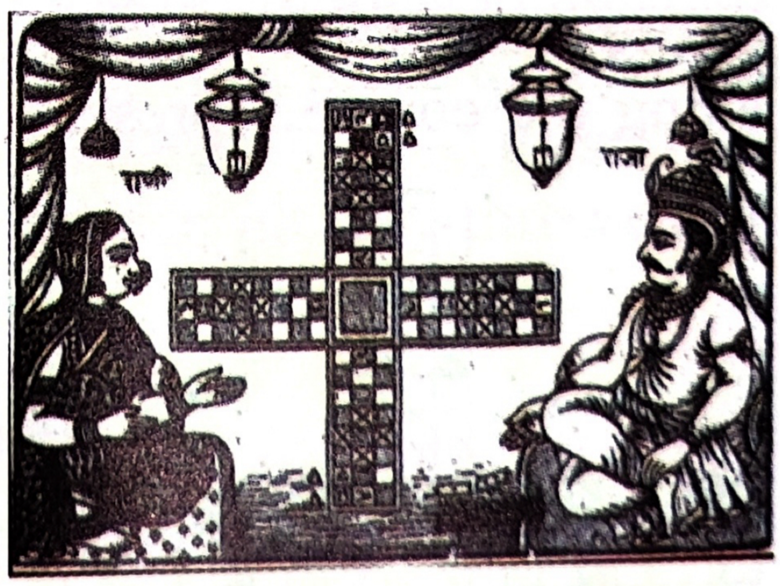

Fig.43: The game of Pachisi being played by Raja and Rani from an ancient drawing. The game appears to be popular among the royalty as well as common folk.

Two to four players test the skill as well as their luck play pachisi and it is so named that the highest value of cowries or dice in the game is 25, whichin Hindi is called Pachisi (Fig.44). There is an element of luck involved in this game but ultimately it tests the skill of the player in anticipating the moves of the opponents and winning it. It used to be a popular pastime game in rural areas of Telangana before the advent of television culture, which evolved during the past few decades across the country. Pachisi game is hardly played these days and people may forget about it in future. Hence this game is being recorded for posterity and it is also true that this game is played differently in different parts of the country. Variations of Pachisi game are known by different names in other parts of the world such as Ludo in England since 1896 and Parcheesi board game in U.S.A. Four players mostly in opposing partnerships of two attempts to move pieces around a cross-shaped track (Fig. 43,44). Moves are determined by throws of cowrie's shells or mostly in ancient times by dice. Each player has four pieces mostly made of wood and they are colored differently. Each piece begins at the centre space, moves down the middle track nearest to the player and counter-clockwise around the outer track of the board. The partnership whose pieces first complete the course by returning to the centre space is becomes the winner. Cross-marked squares along the course represent castles in which the occupying

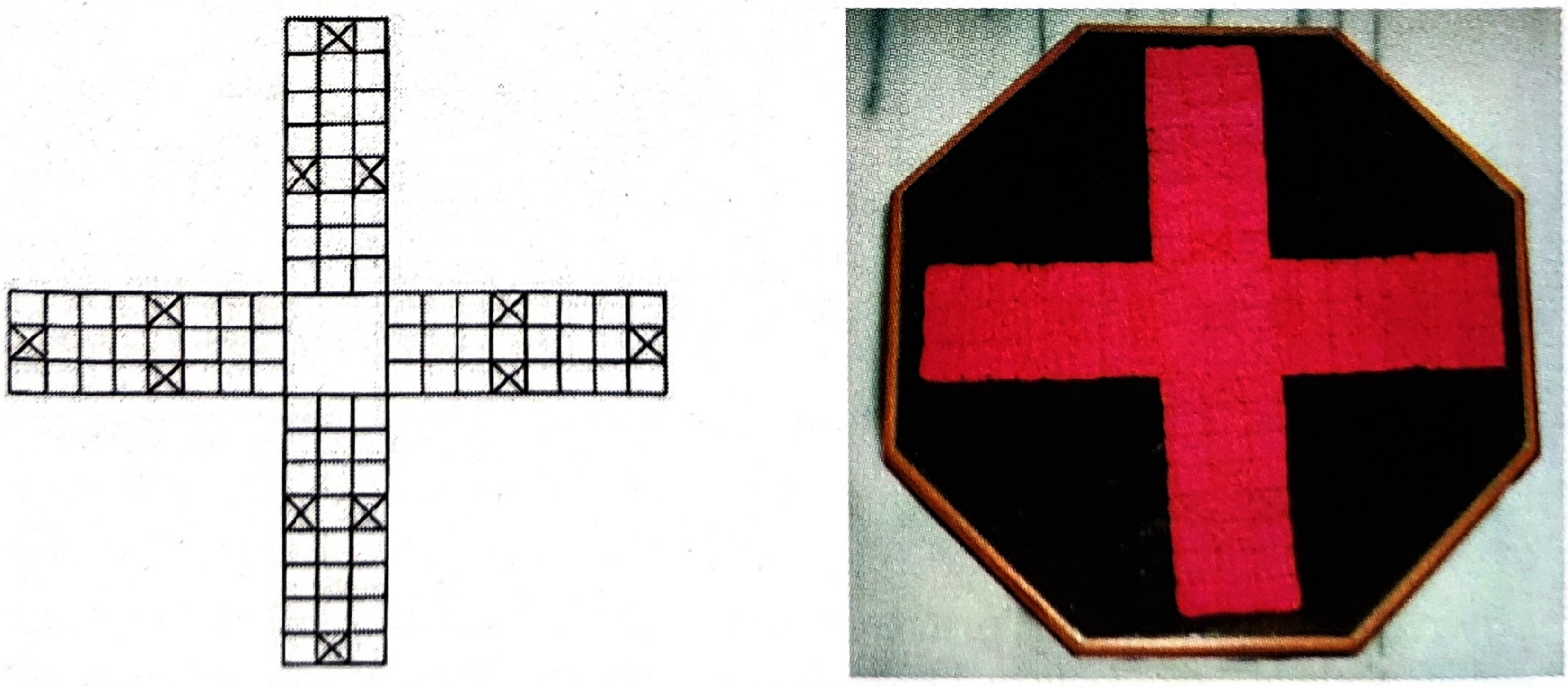

Fig. 44 & 45: Basic design of the game on the left side. Cloth design of Pachisi game on the right side. The central Charkoni and Castle squares are marked with a cross designed in cloth. The central area is shown blank on left side. The pieces start and end in the central Charkoni.

pieces cannot be captured. An occupied castle is open to the player's other pieces or those of his partner but closed to those of his opponents. Pieces resting on other squares can be captured and then the piece goes back to the centre to begin again.

Equipment:

The game 'pachisi' is in the shape of a cross; each arm being divided into three adjacent columns of eight squares each (Fig.46). Three of the squares on each arm are highlighted with a cross or some other distinguishing mark-the middle square at the end of each arm plus the fourth square in from the end of the arm on either side. These squares are called 'castles'. The middle of the cross forms a large square called the 'charkoni'. Boards can be of any material although commonly these days, it is made from strong cloth, with the gaming pattern embroided onto it. Sixteen beehive shaped pieces are used, four in black, four in green, four in red and four in yellow. 7 cowry shells provide the element of luck or chance, that when thrown, indicate the numbers according to the rules of the game. The numbers indicates the squares one can move counter clock wise (Fig. 47-56).Some numbers get a grace. Those with a grace allow a new piece to start from charkoni and the number is the squares that piece can move on the board. Those with a grace can play by throwing the cowries again as well.

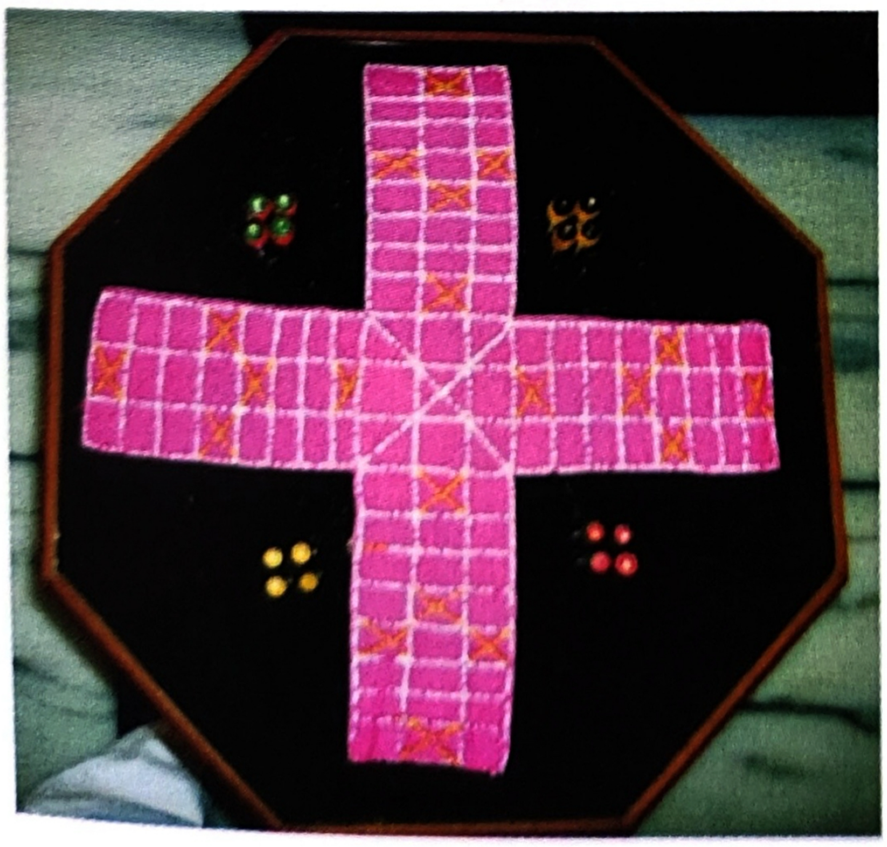

Fig.46: Beginning of the game with each player having four pieces of different colors

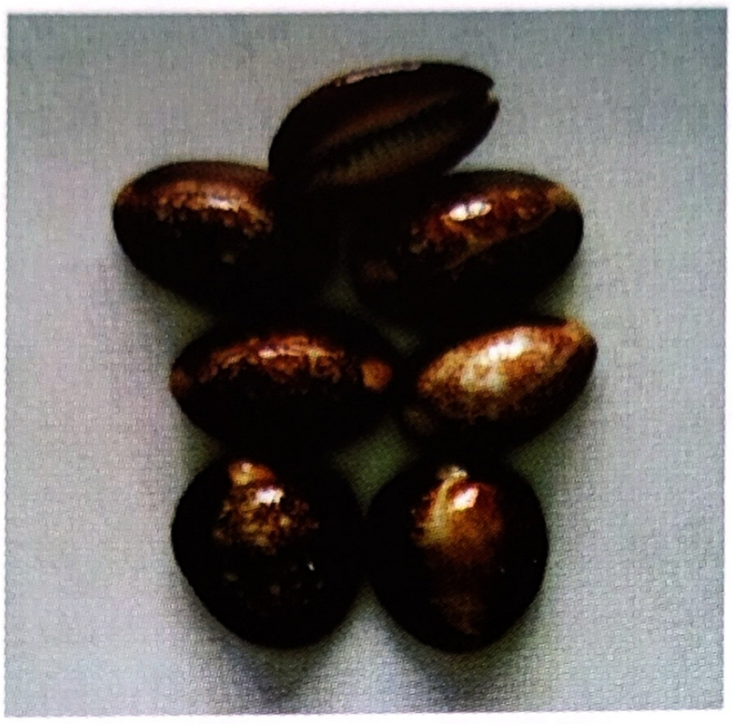

Fig. 47: One cowry with mouth up- 10 (Dus) + grace.

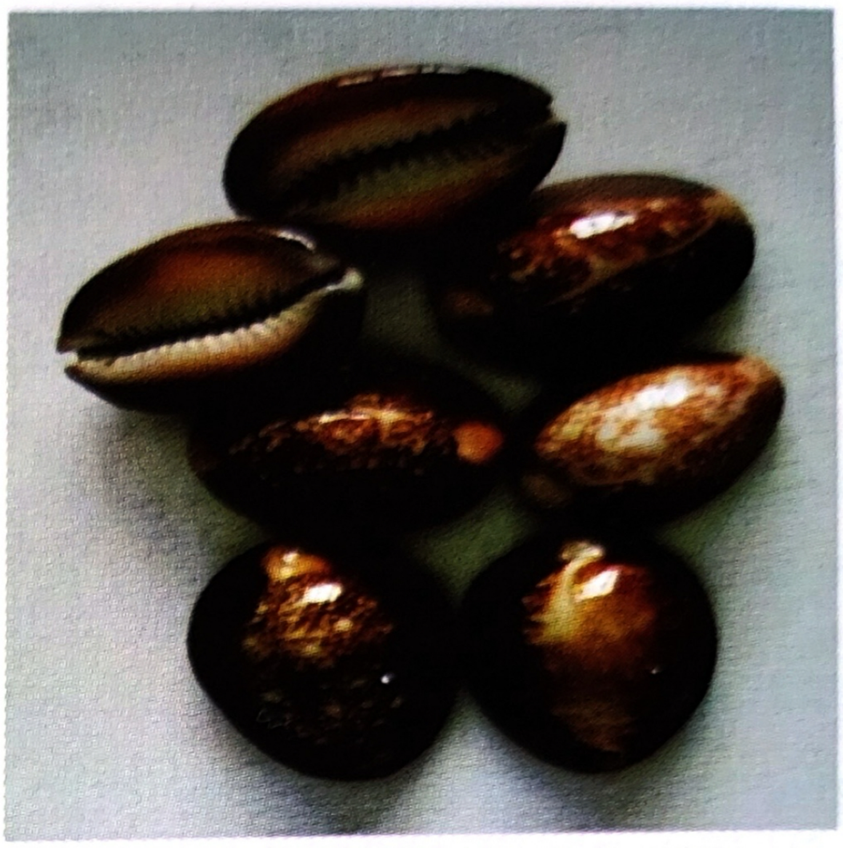

Fig.48: Two cowries with mouth up-2

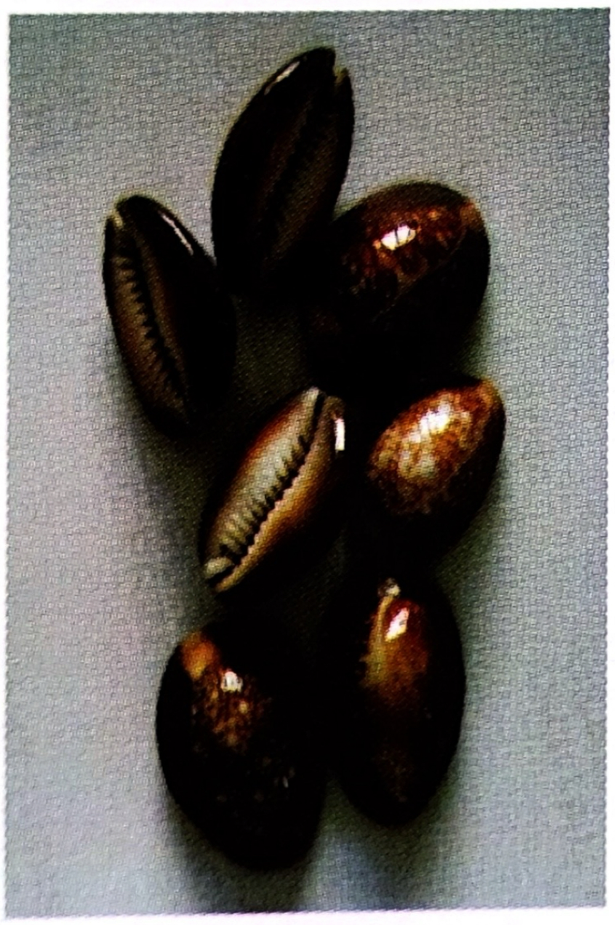

Fig.49: Three cowries with mouth up- 3

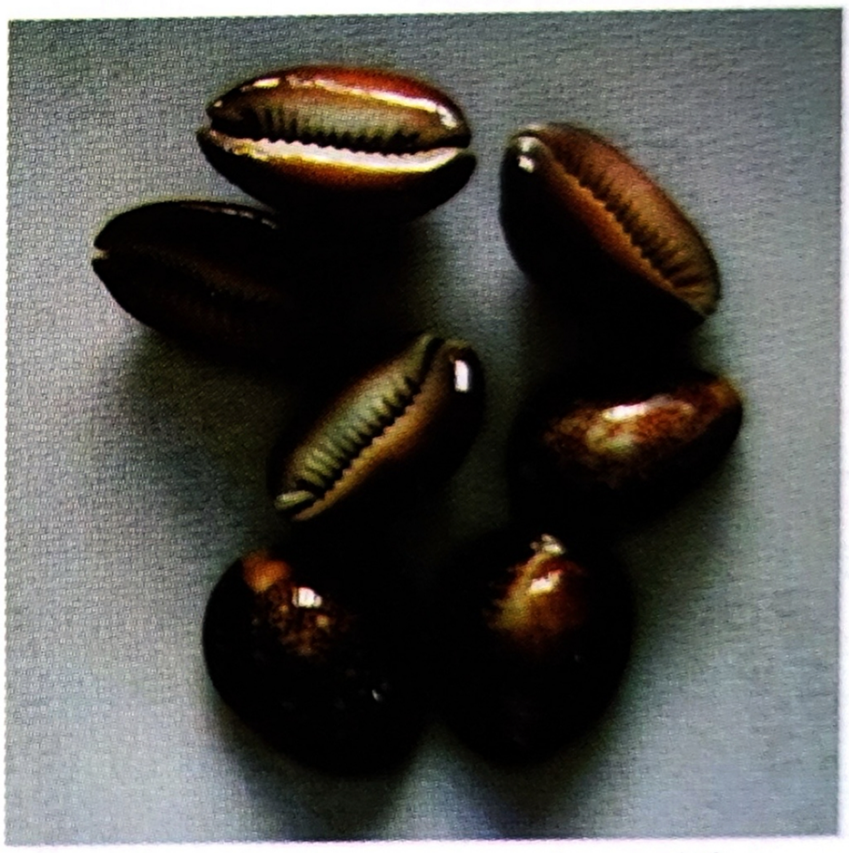

Fig.50: Four cowries with mouth up-4

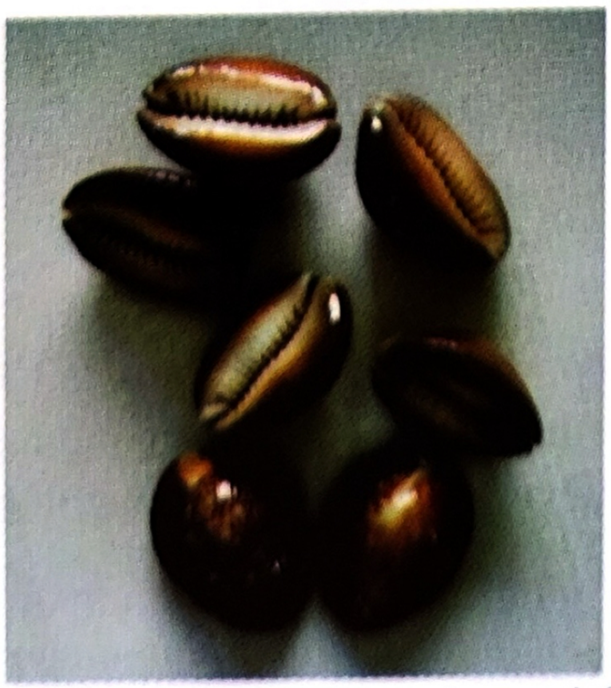

Fig.51: Five cowries with mouth up- 25 (Pachis) + grace

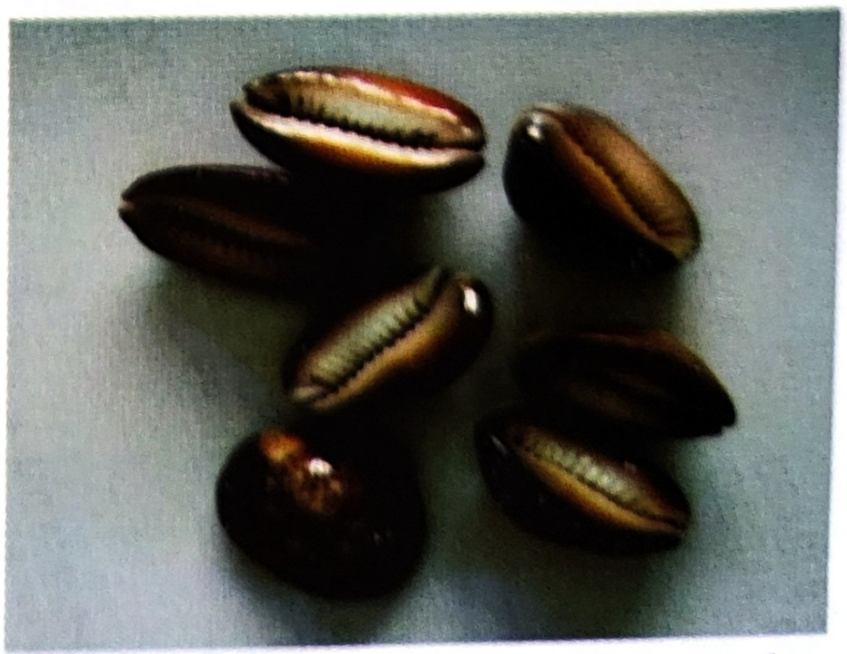

Fig.52: Six cowries with mouth up- 30 (Thees) + grace

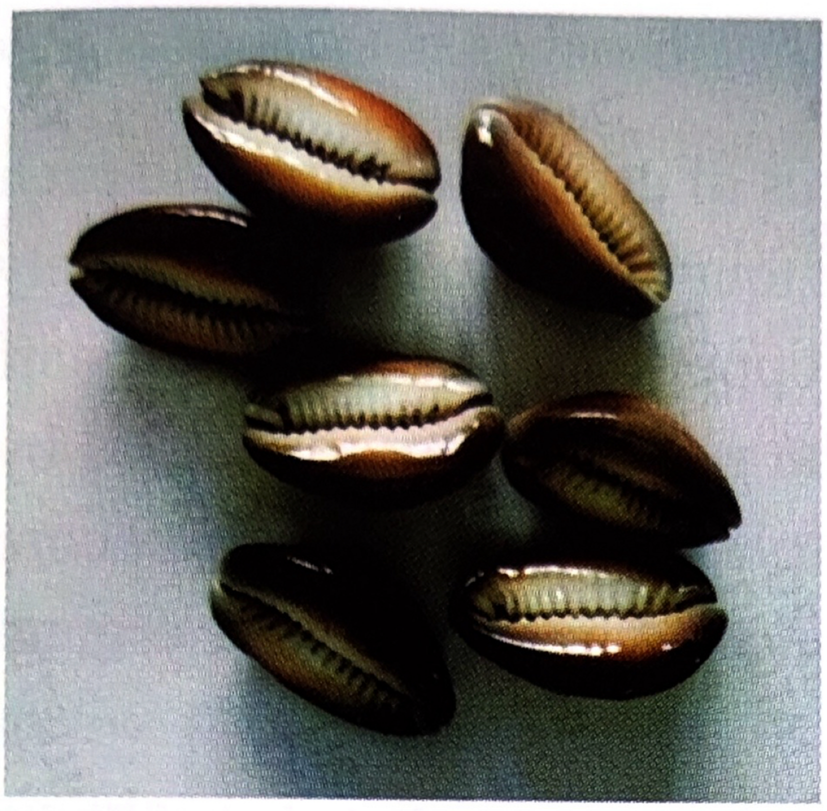

Fig.53: Seven cowries with mouth up -14 (Chauda)

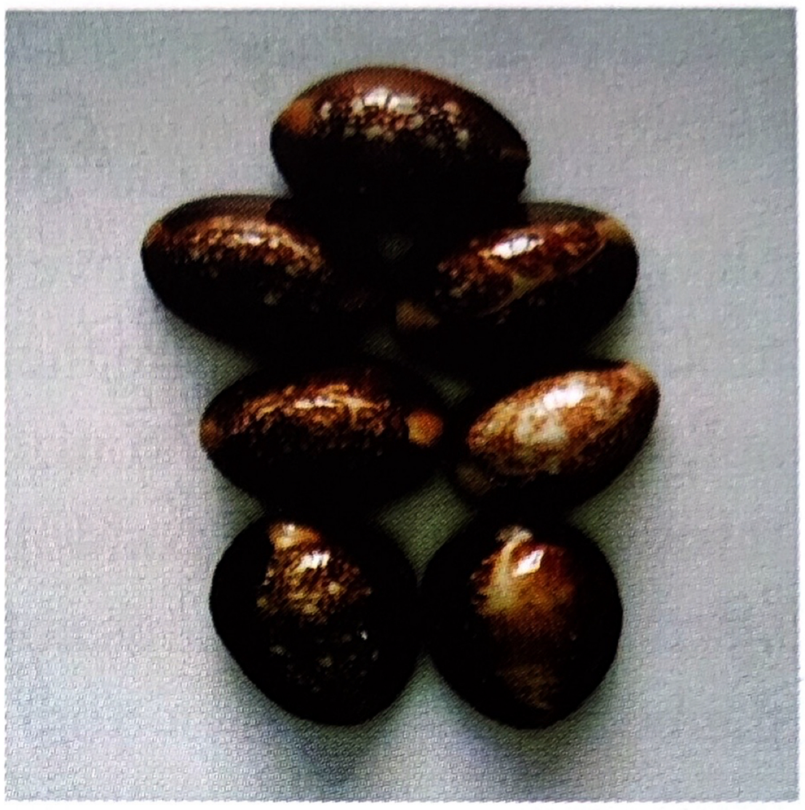

Fig.54: No cowries with mouth up- 7 (Saath)

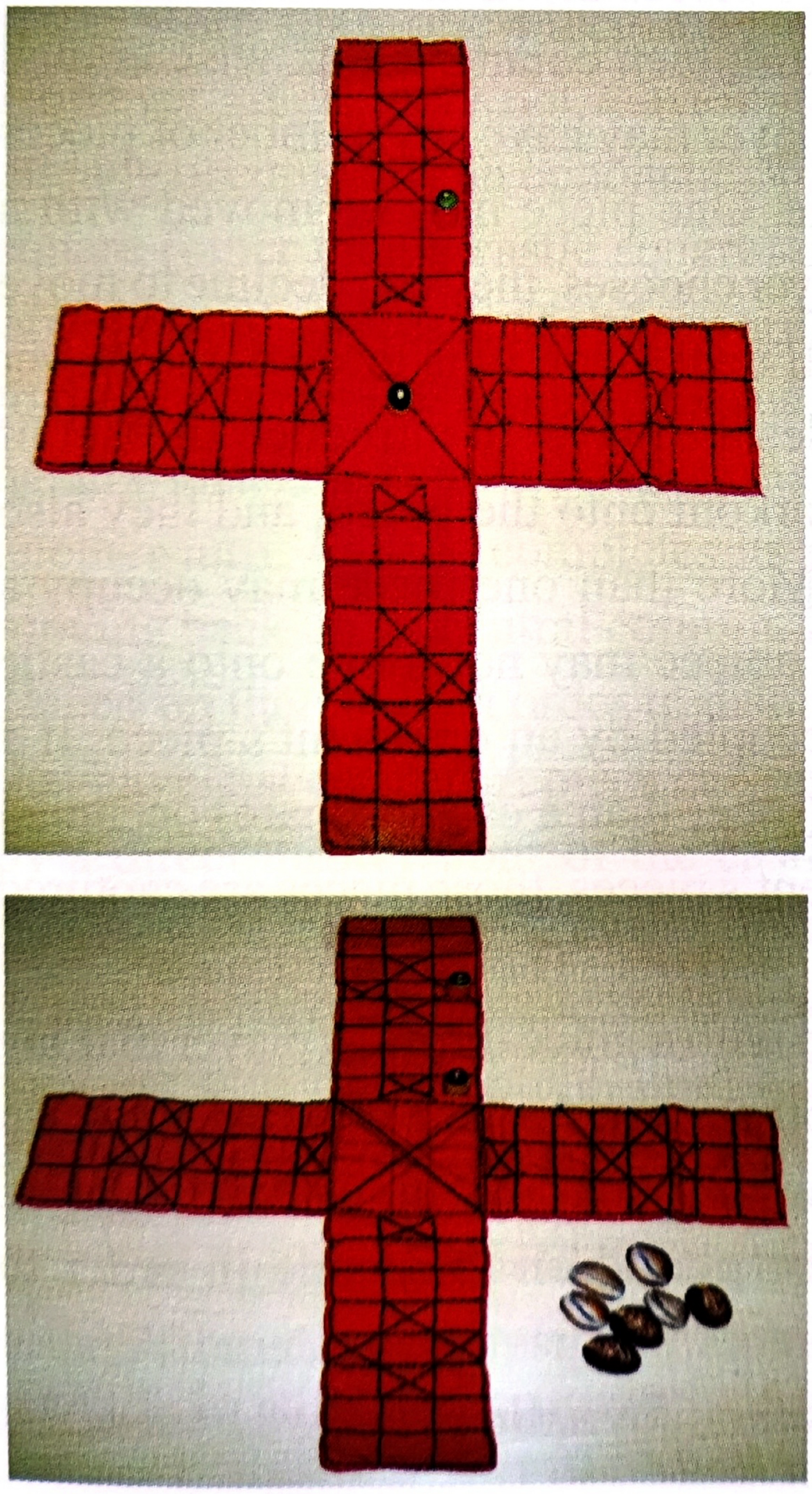

Fig. 55, 56: Movement of the pieces based on the numbers from the cowries' areshown in these photographs.

Rules of the game:

Each player has four pieces of different colors and each player's objective is to move all four of their pieces completely around the board, before their opponents do. The pieces start and finish on the charkoni. The playing order is decided by throwing the cowries and the player with the highest score starts the game, and turns continue counter clockwise around the board.

Each player's first piece may leave the charkoni on any throw. Players move their pieces down the centre column of their own arm of the board, then counter-clock wise around the outside columns. A player may have any number of pieces on the board at one time. One piece may be moved with a single throw, or if the player chooses, they can decline to move any piece on the throw. If a 10, 25or 30 is thrown, the player gets a grace which enables the player to introduce another of their pieces from the charkoni onto the board, and they also get a repeat their turn. More than one piece may occupy a single square. However apiece may not move onto a castle square that is already occupied by an opponent's piece. If a piece lands on a square (other than a castle square) occupied by any number of opponent's pieces, those pieces are captured and must return to the charkoni. The captured pieces may only enter the game again with a grace throw. A player making a capture is allowed another turn. A piece completes its trip around the board by moving back up its central column. Returning pieces may be placed on their side in order to distinguish them from pieces that have just entered. A piece can only return to the charkoni by a direct throw? Four of the castle squares are placed so that they are exactly 25 moves from the charkoni. A common strategy is for returning pieces to stay on these squares, where they are safe from capture, until a 25 is thrown. Then they can finish the game directly.

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This game of pachis, which is played in Telangana, differs from the game played in other parts of the country. It has seven cowries to play and the number of moves goes up to thirty instead of twenty-five. This game is only played as a past time and money is never bet on it.

In the beginning six faced dice with numbers ranging from 1-6 were used (Fig. 57 a & b). Each number was given the number of moves and those with grace were indicated.The game as it is played in other parts of the country continued to play with dice or six cowrie shells.In this regard the game differs in Telangana from the game which is played in the Hindi belt of India (Fig.58).

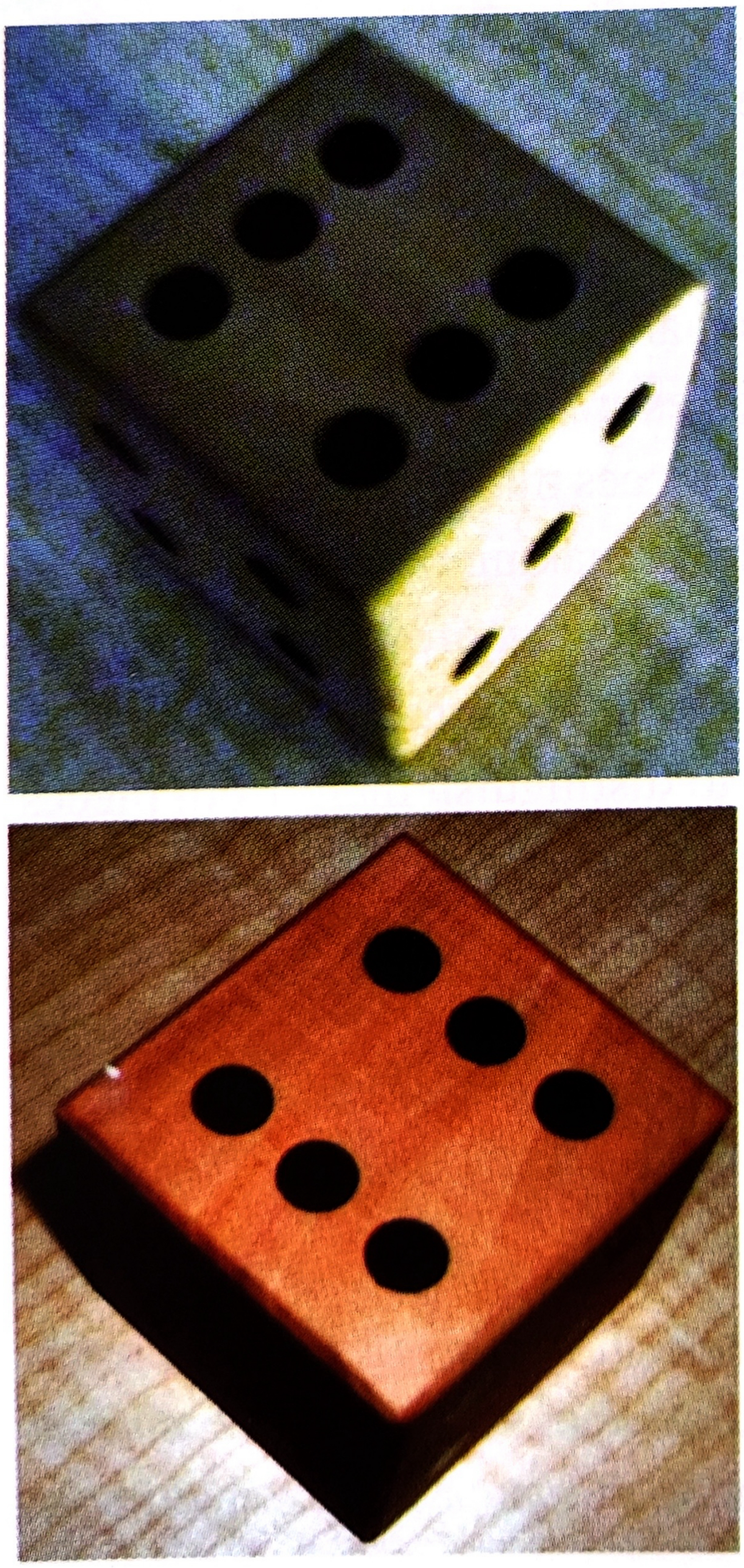


Fig.57 a & b: A cube has six sides and it had markings from 1-6 and when thrown the the top number is counted.Other sides would have different numbers. Since the game was played with a dice made of cube it had marks from 1-6. When cowrie shells were used as in Telangana seven numbers came in to use.

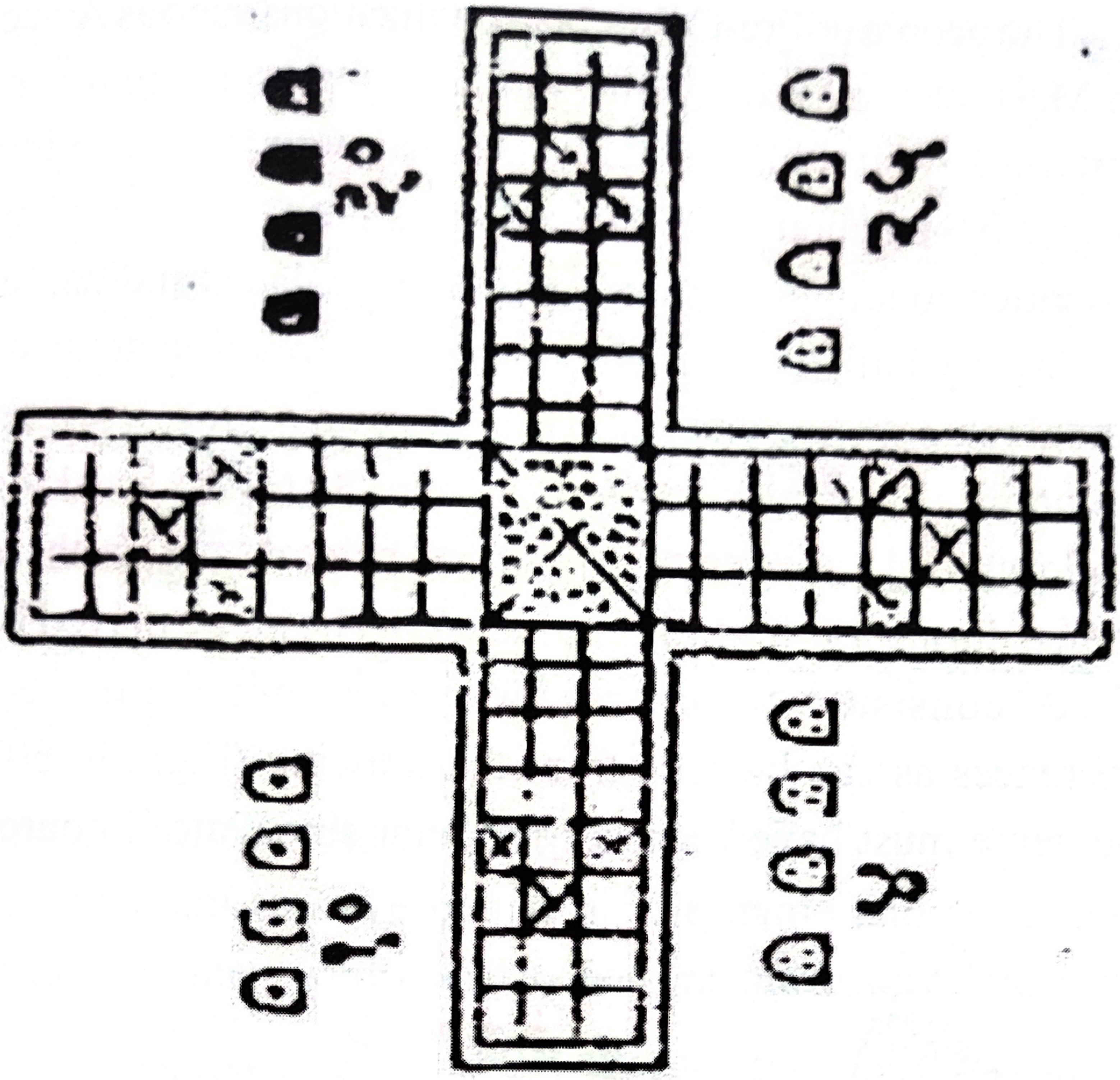


Fig.58: Pachisi is played with different sets of rules in various parts of India. However basic game is same.

Chaupar game is similar to Pachisi and it has different set of rules.It is played with dice and not cowrie shells. The first piece to leave charkoni can depart with any number. All subsequent pieces are only allowed to start or reenter the game using a grace throw. The rules of pachisi it self varies from place to place. Some play with six cowries and value of some numbers may vary.

Ludo and Parcheesi are similar board games as Pachisi which are played in U.K. and U.S. A. respectively. Ludo was introduced in United kingdom in 1896 AD.

The people of Pre-Columbian civilizations such as Aztec and Maya also played a game similar to Pachisi which was known as Patolli (Phillips 2013). The rise of great civilization of Maya began about AD 250 and lasted until AD 900. They built cities containing temples, pyramids, palaces and courts for playing ball games. They also developed system of Hieroglyphic writing and highly sophisticated calendrical and astronomical systems. The Aztecs were Nahauatl-speaking people who ruled large parts of Central America and southern Mexico during 14th and 15 centuries AD.The game played by Aztecs consisted of squares in a cross but there were differences as can be seen from the drawing (Fig. 59, 60). The game must have been very popular sincePatolli boards

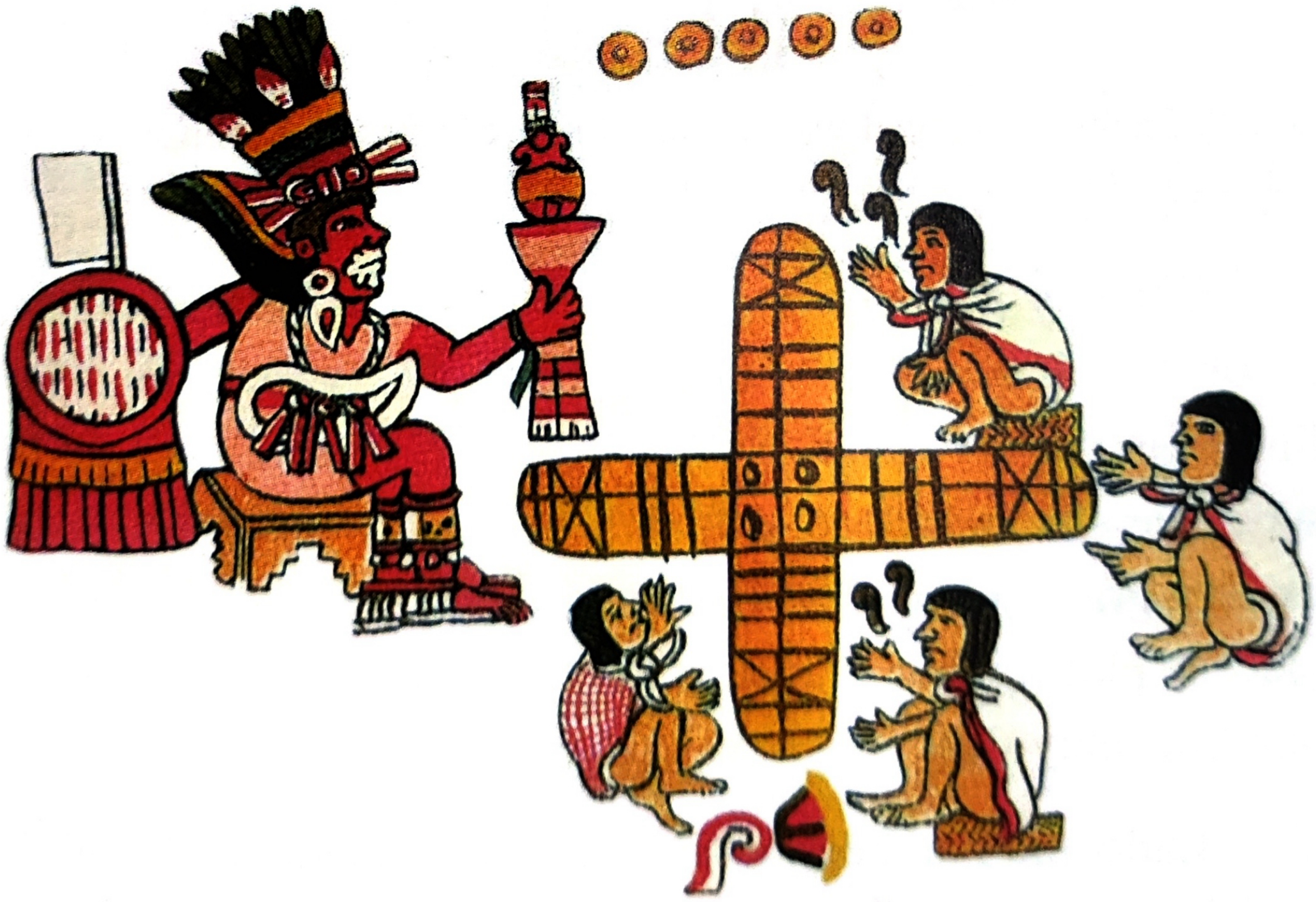


Fig.59:The Atec codice of Magliabechano of late 1500 AD contains the game of Patolli being played by four people (Phillips 2013).

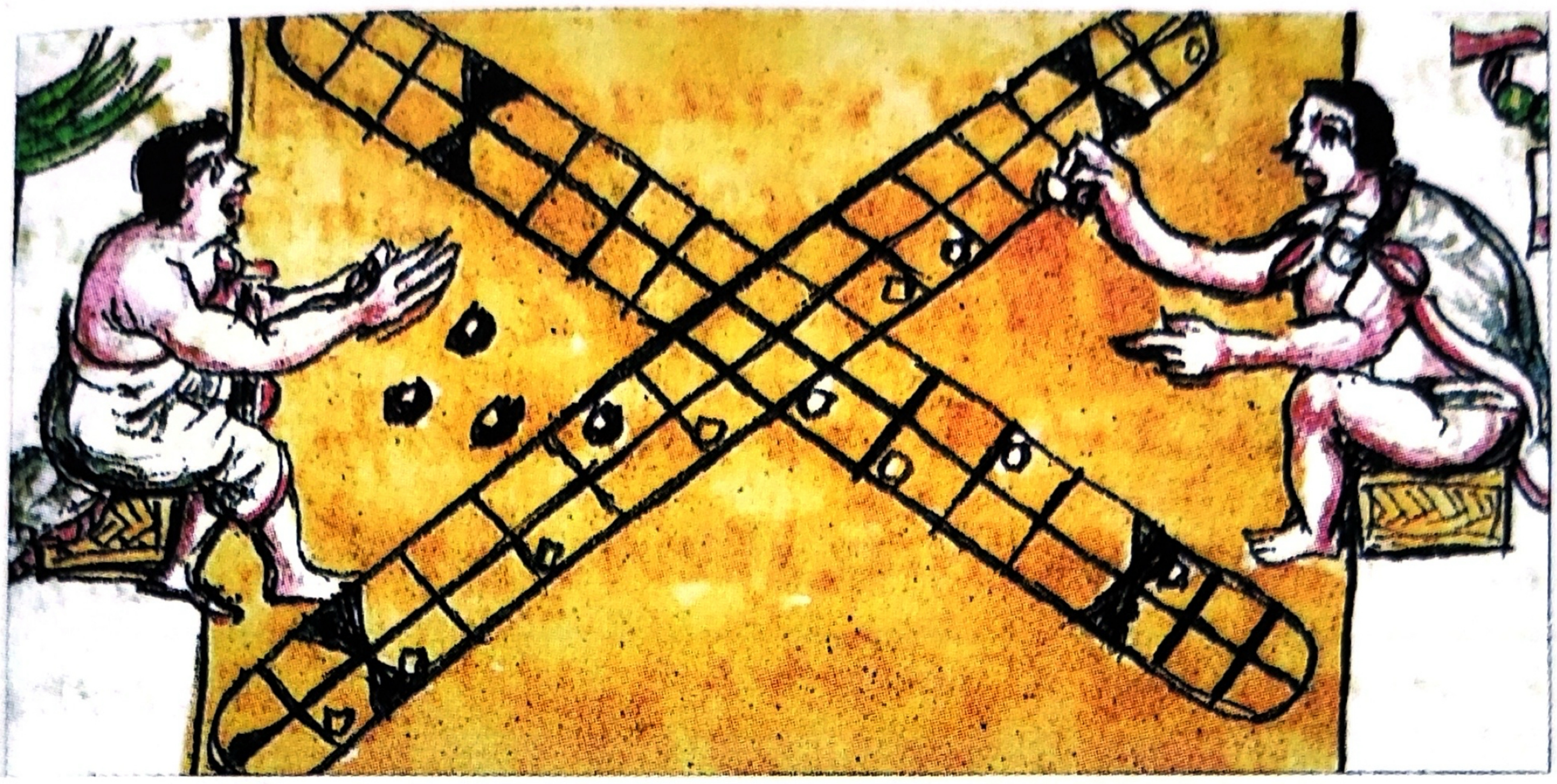


Fig.60: Diego Duran gave a full account of Patolli in the Codex Duran (Phillips 2013).

were marked on the floor of Palaciouemado of Tollan. The people seem to have betted on the game and sometimes priestly diviners were asked to interpret the result of the game.

A search of the ancient civilizations may reveal the presence of many ancient board games.

3

Chess

The chess now is one of the popular game for two players, using a checkered board and specially designed pieces. Each player moves sixteen pieces of his set in accordance with rules on the movement of each type of piece, attempting to force the opponent's principal piece, the king, into a position where it is unable to escape capture. The game of chess is played according to the Laws of Chess as formulated by World Chess Federation. These include not only the basic rules but also specialized regulations that apply to official tournaments and matches. This ancient game originated in India as a war game and was known as 'chaturanga'. This ancient Indian board game can rightly be considered as a India's gift to the world. This game witnessed lot of changes over the centuries and the present game of chess took final shape in the nineteenth century in Europe.It even acquired a patron goddess, Caissa, the muse of chess, first appearing in a poem by William Jones in 1763. Jones also wrote in detail about the origins of chess in India in articles in the journal of Royal Asiatic society (Jones 1817). This games' drawing can be witnessed in ancient Indian forts and temples..

Chess is the oldest ancient Indian board game and some claim that it was played for almost 4000 years right from the times Vedas were written in India (Falkener 1892, Murray 1913; Hooper 1992; Shenk 2006). Chess was called as 'Chadaranga' or 'chaturanga, which was based on the concept of ancient Indian battle strategy of Chathuranga sena, name for a battle formation mentioned in Indian epic Mahabharata. This consisted of infantry, horses, elephants and chariots. Chaturanga was the earlier precursor of modern chess because it had two key features found in all chess variants namely different pieces had different powers and the victory in the game depended on one piece, the king of modern chess. The same chaturanga sena tactic was followed by Porus when he faced Alexander in the battle on the banks of river Jhelum in 326 BC. This battle was fought between the Greek Alexander and the Indian king Paurava (whom Greeks called as Porus). Porus followed chaturanga sena and used 40000 infantry (paiks), 4000 horses, 1000 chariots and 200 elephants. Alexander had 30000 men.

How the chess was played in India during the visit of Al-Biruni (973-1048 AD)sometime after 1017 AD is given in his comprehensive study of Indian culture in his book entitled Tarikhal- Hind (Sachau 2009). Four persons played the game at a time then and naturally the it had four kings (Fig.61). It had tower, horses, elephant and pawns and dice were used in the game. Rules of the game evolved slowly and today's game reached present status in the early 19th century in Europe. The game involves moves and countermoves to corner opponent's king. It used to be played by four people in ancient India and dice were used and ultimately it developed as a game between two players in Persia. Dice was dispensed with. This game needs foresight, judgement and intuition and naturally those who practice this game becomes a better performer in academic field. The importance of chess in the birth of cognitive science and its key role in the aesthetic modernism in the twentieth century has been recognised.Its importance in the development of artificial intelligence and use as a teaching tool is stressed. Goethe described chess as the 'touchstone of intellect' and Lenin noted it as the 'gymnasium of mind'. These were the reasons for making this game compulsary in some states of India such as Gujrat and Madhya Pradesh.

AI Beruni's India

They play chess—four persons at a time—with a pair of dice. Their arrangement of the figures on the chess-board is the following:—

Tower (*rukh*)	Horse	Elephant	King			Pawn	Tower
Pawn	Pawn	Pawn	Pawn			Pawn	Horse
						Pawn	Elephant
						Pawn	King
King	Pawn						
Elephant	Pawn						
Horse	Pawn			Pawn	Pawn	Pawn	Pawn
Tower	Pawn			King	Elephant	Horse	Tower

Fig.61: Drawing from the Alberuni's India.

Chess developed as a war game in ancient India and the chess board has been compared to a battle field and each side now has pieces (16 white and 16 black) which are compared to contending armies. The players think in terms of attack, defence, manoevers, captures , ambushes and many other terms suggesting a combat. When chess spread to the other parts of the world, it developed regional variations in the game such as Persian, Chinese, Korean, Japanese, Malay and Myanmar etc. For example in Persia the chess came to be known as 'shatranj' the game became a contest between two players and the dice were done away with. Chinese chess(Xianggi) had nine files and ten ranks as well as a boundary river between the 5th and 6th ranks which limits the access to the enemy camp and the game becomes markedly slower.Shogi is the name for the Japanese chess and it has 9X 9 board with some differences.Korean chess is known as tjyang-keui chess is a variant of Chinese chessbut there are important differences between the two games,The design of the board is same but not its shape which is oblong.In Korean game the files are carried across the river which is in fact ignored. The chessmen have the same names and except that the king is placed in the center of the camp and the horse and elephant are interchangeable, occupy the same positions at the beginning of the game.But their powers and priviledges in most cases differ markedly.

There were other changes in the game during the past many centuries. Present day chess game evolved during the nineteenth century and it would be interesting to see the evolution of the present day game from that of chaturanga. In the present day game broadly it has chessmen or chess pieces which can be divided into two types namely powers and pawns.The pawns are eight in number on either side and they look similar and perform the same functions. The powers are of five types- king, queen, rook, bishop and knight.There was no queen in chaturanga which came as a vazier and later became the queen. Shatranj resembled chaturanga but added a new piece, a firzan (counselor). The game could be won either by eliminating all opponents pieces barring the king or by ensuring the capture of the king as in the present day game. Moves of each of these powers are different and some of these were added during the past few centuries. For example the the power of elephant in chaturanga was limited and it moved straight on like the pawn, one square at a time. The king is the most important piece in the whole game, because the sole aim of the game is for one side to force the surrender of the other king.It was also true of ancient wars. For example the Mughal army led by Aurangjeb encircled and put a seige to the Golconda fort in 1687 for eight months but the war was not over till the surrender of the Qutb Shahi king Abul Hasan Qutb Shah(1672-1687 AD) on September 22, 1987. King is not the most powerful piece in chess, since its scope for movement is rather restricted compared to other pieces on the board. The king can move only one square at a time, either on files, ranks or diagonally. The queen is the most powerful piece in the chess game.Like the king it can move in all directions but the difference is that there is no restriction on the movement of the queen like that of king who can move only one square at a time. The rook can move anywhere along a whole rank or file in straight lines and it becomes very effective in late stages of the game. Bishop can move diagonally and it becomes effective in the initial stages of the game since diagonals are released more quickly than ranks and files in the game.The knight has a tricky movement while all others can move in a linear fashon.It moves one step vertically or horizontally and other step diagonally.Knight has other advantage and it can jump over a piece blocking its way.The pawns are the foot soldiers in the chess war game and they can move only one step at a time except when they are still in the original position. In that case they have an option of moving one or two steps.

En passant, castling and promotion of pawns after they reach the final rank are the other additions over the years.En passant is a French phrase which means 'in passing'. En passant is the rule which enables a pawn which has moved three steps from its original square to capture an enemy pawn moving double steps on any of the two adjacent files. However, the en passant rule is only valid in the case of an enemy pawn moving two steps from its initial square. If it has already moved one step and then moves another step on another move, then it can no longer be captured. Another important concept pertaining to the king is 'castling'.In chess King is the important piece and must be safely be guarded. Castling is one means of safe guarding the king. Castling is possible when there are no pieces between the king and either of the two rooks.In that case the king will move two steps to the right or left, and rook will cross over the king and rest on square next to it. Castling can be of two types. When during castling the king and king's rook cross over each other it is known as king side or short castling.When the king and queen's rook cross over each other it is known as queen side or long castling.There are some conditions under which castling is not permitted. The idea behind castling is that the king is safe in a corner and all other pieces are free to cooperate with each other against the enemy pieces. Promotion of pawn is another rule. For example pawn had acquired the ability to move two squares on its first turn, rather than only one at a time as it did in Shatranj of Persia.When the pawn reaches the final rank. In that case pawn can be exchanged for any of the powersqueens, rooks, bishop or knights. The counselor was limited to moving one square diagonally at a time became the most powerful piece on the board- the modern queen.In chaturanga piece called elephant which had been limited to a two-square diagonal jump in shatranj became the bishop, more than doubling its range. With the new queen and bishop powers the game became fast and was replaced by a game in whichy checkmate could be delivered in a few moves.There are three possible conclusions to a chess game-a). checkmate, b). stalemate and c) draw. Some further refinements are added to the game in the recent years.

Sixty four square piece board game can only be chess and design of this is seen in many temples and forts in India. The drawing of Al-Beruni's chess design of India has 64 square pieces only.In some forts one rarely witnesses a board game which has more squares than sixty four. It is obvious that the chess game has evolved over the centuries and continues to appeal to millions of people around the world.

4

Puli Judham (Tiger and goats game)

Puli (tiger) judham is another popular game in ancient times and drawing of this board game can be seen in forts, temples and even on any stone where people gather(Fig.62-64).This is a game played by two people. One takes the two tigers and the other player takes 21 goats. Two tigers are in the center and eight goats surround them.Tiger can jump over one goat but cannot jump over two goats.Tiger can kill a goat if it is single. Two goats get killed in the beginning but remaing 19 try to protect themselves and if they surround the tigers the game is over.There are some variations in the game but the plan of the game is to isolate the tiger with goats all around. Trying to corner the tiger by goats is one strategy of the game.If more than five goats are killed the game is over.Some play with 16 goats and two tigers but there could be only one tiger.

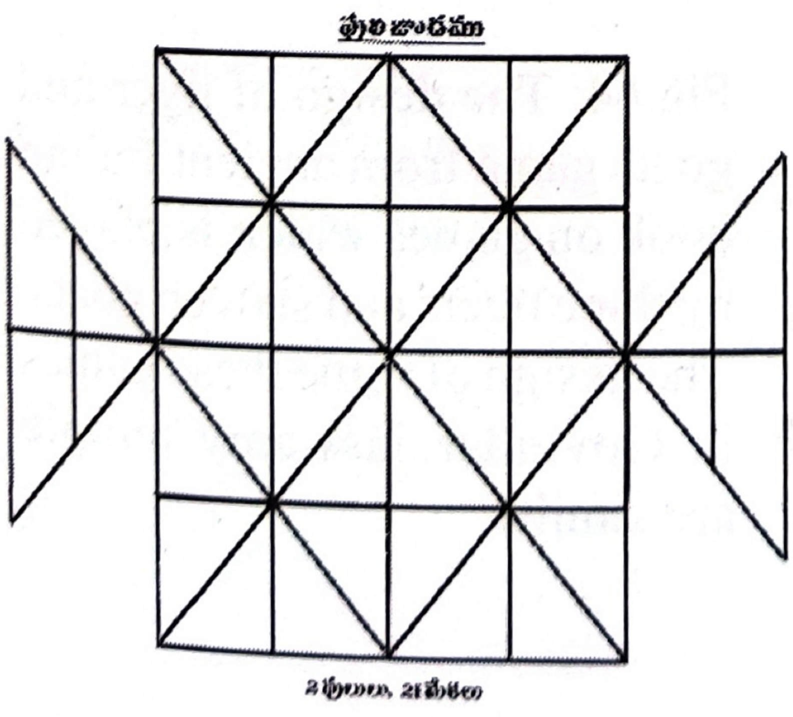
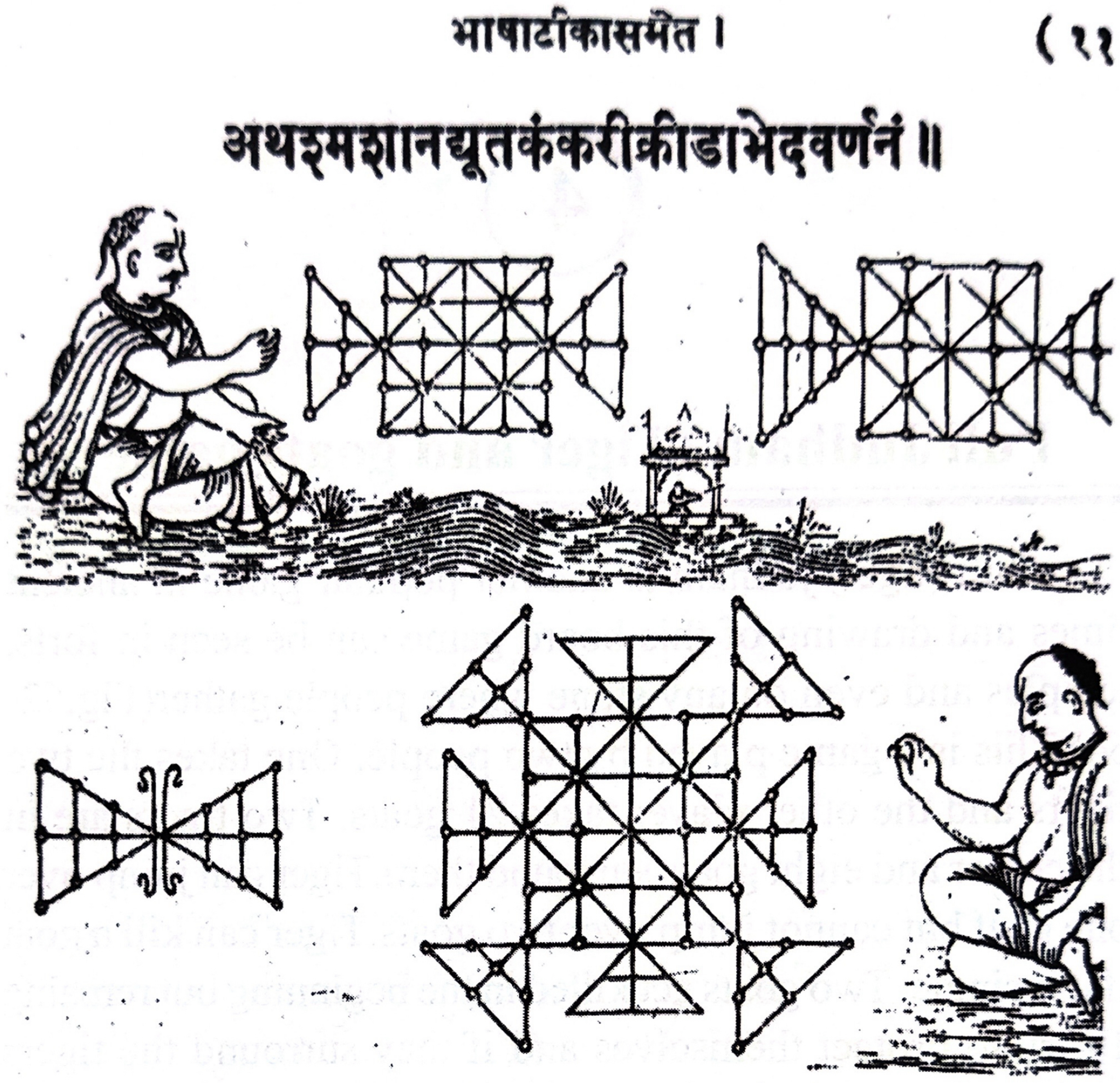


Fig. 62: Tiger and goat game as played in Telangana.



भाषाटीकासमेत । (११

अथश्मशानद्यूतकंकरीक्रीडाभेदवर्णनं ॥

Fig. 63: These drawings of the tiger and goat game from ancient texts make it obvious that the game can be played with more people.

It is played with either 2 tigers and 21 goats Or 2 tigers and 16 goats.

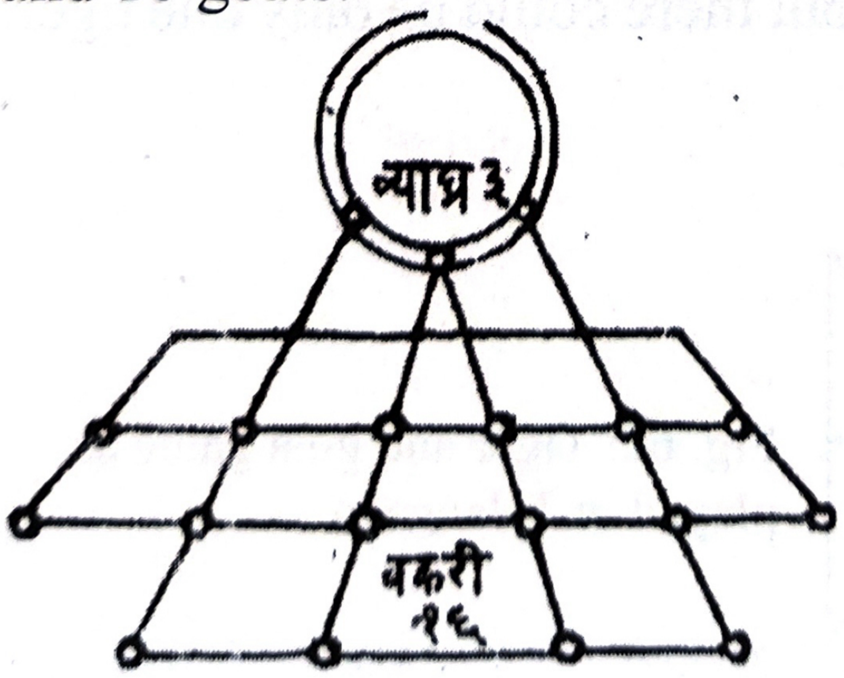


Fig.64: The design of tiger and goats game from ancient Indian book on games which is played by three tigers and sixteen goats. The design of some these games in Govindarajaswamy temple are similar.

The game is also changed to make it faster. The squares are lessened and the corners on either side are shortened. Instead of 21 goats they are reduced to 15 and there is only one tiger and not two.The design of the game also varies and different designes of the games can be seen in the ancient forts and temples.

5

Dhadi/ Attack game

This is another board game which is played by two people who alternately insert pieces, 11 pieces each. If one can put three pieces in a line it can kill one of the opponent. Whoever loses their pieces loses the game and other is the winner (Fig.65-68).

Fig.65: Dhadi game design in the Rachakonda fort in Telangana.

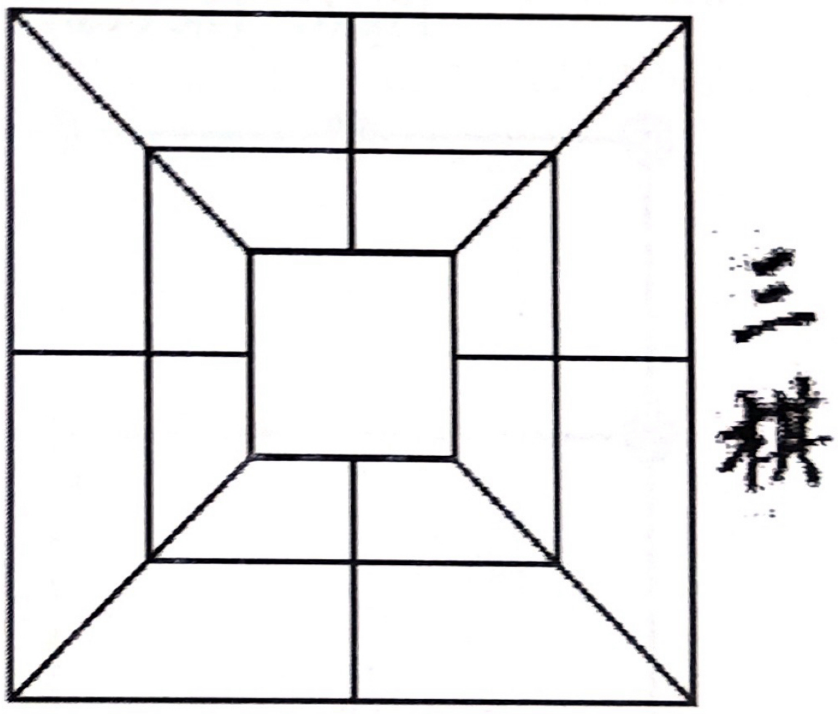


Fig.66: Similar game in China and is known as Samki or three Chess (Culin 1895).

There are similar games in the orient namely Japan, Korea and China which are similar to Dhadi game with minor variations. Figures are below-Fig.58-59-60

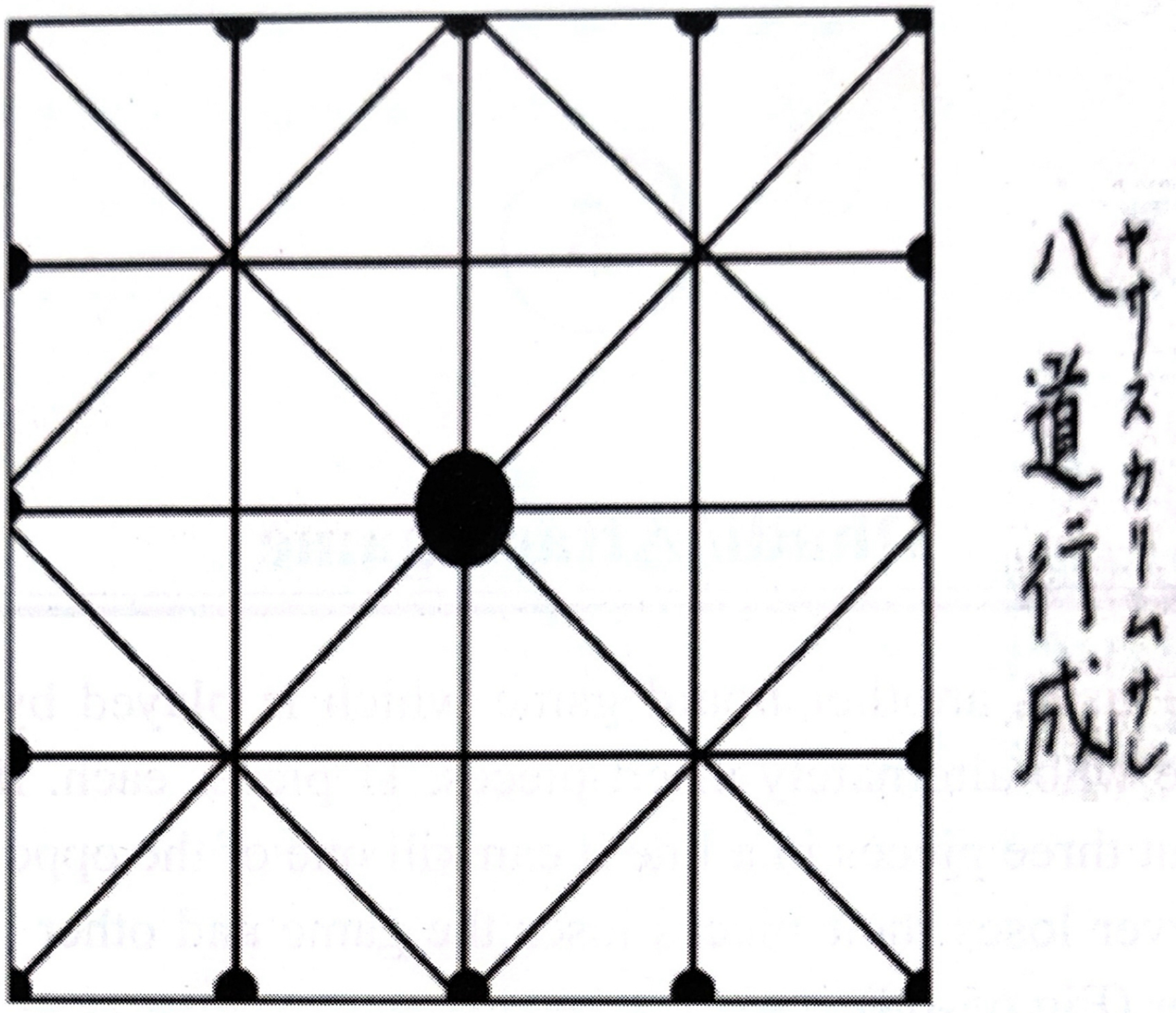

八道行成
ヤサスカリムサし

Fig.67: The design of Chinese game

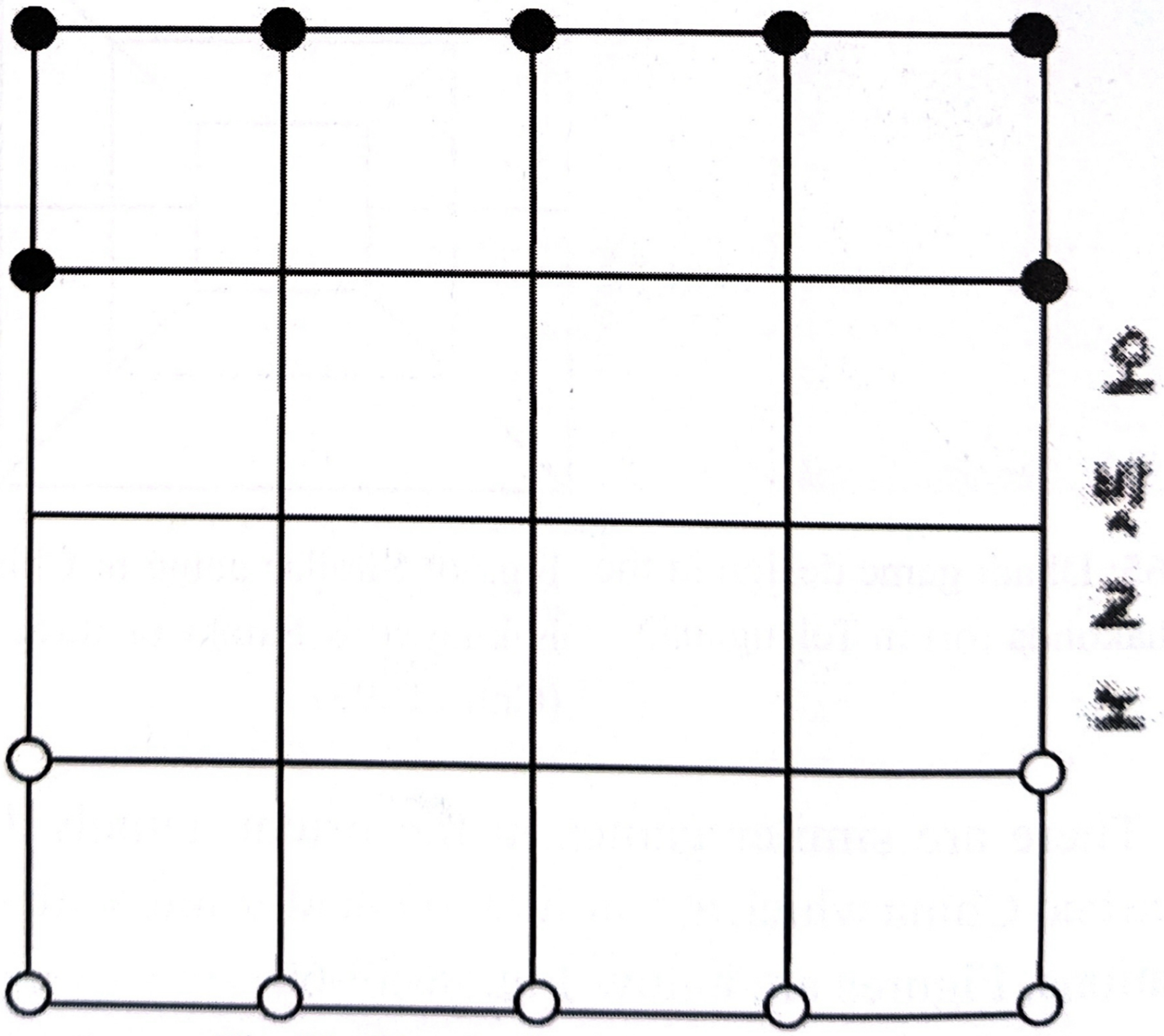


Fig.68: The design of Korean game

6

Kailasam / Snake and ladders

This is an another ancient Indian game which is also very popular in rural areas.It is played by two people and it starts from the bottom and whoever reaches the top first wins the game.The throw of cowries decides the number of moves and the presence of ladder helps to go up and the snake puts break and pulls one down(Fig.69). The number of ladders and snakes are pictured on the board. The game has morality

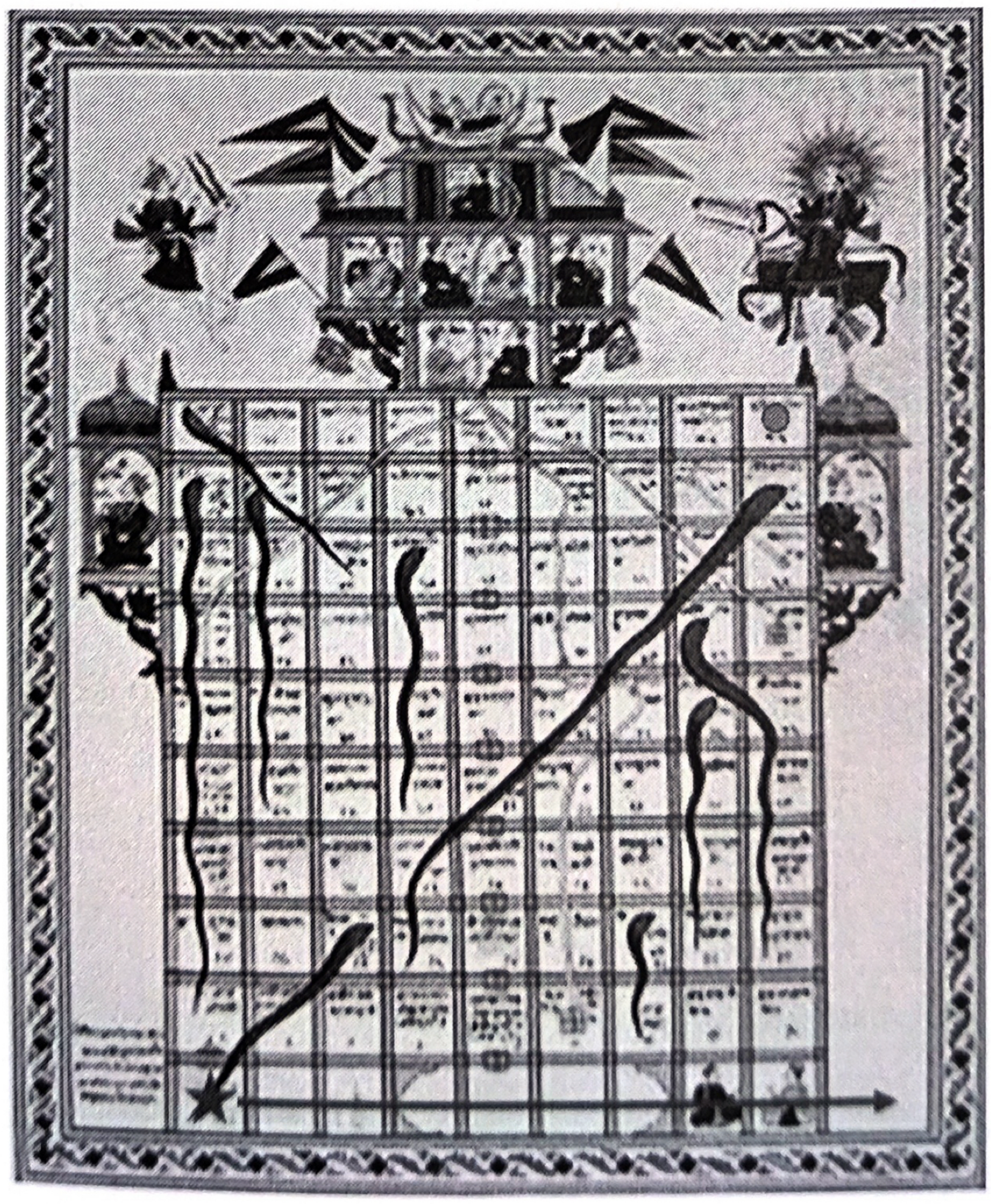


Fig.69: Kailasam/ snake and ladders game

aspect where a games progression up the board represents a life's journey complicated by virtues (ladders) and vices(snakes). The game as played in ancient India was known variously as Moksha patam, Vaikuntapali, Paramapada Sopanum and emphasized the role of fate or karma.It focussed on destiny. Snakes represented lust and passion.Person can attain salvation(moksha) through doing good. This game made its way to England and was called as 'snakes and ladders game' and in USA as 'chutes and ladders game'.

This game is variously known and there is an element of moral in it.Ladder are for those who do good deeds and snakes swallows those who do bad things. It has 100squares and 19 chutes and ladders.Every ladder one hopes to climb, a snake is waiting just around the corner.The game starts from 1 and moves along the numbers marked from 1-100 and each column has 10 suares each.The game starts and ends which are marked red and green.

7

Ashta Chamma

It was another popular board game in ancient India. It is either played with 5X5 or 7X7 grid squares. The five and five grid game has 5 squares crossed where as the seven and seven grid has eight crossed squares. Eight Cowries decide the number of moves and in this respect it is similar to Pachisi and it is like chess considered as ancient war game (Fig.70, 71).

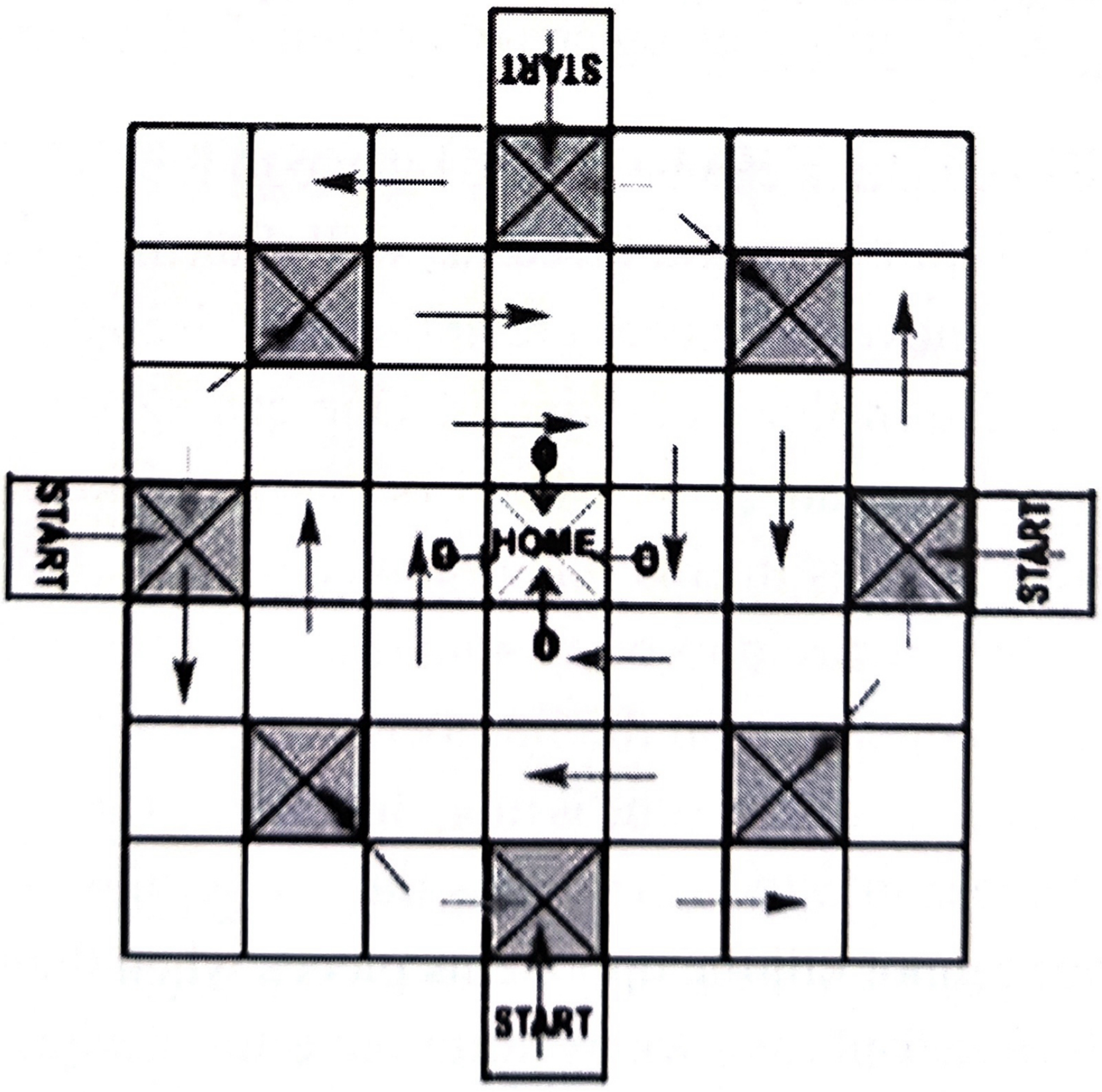


Fig.70: 7x7 grid game

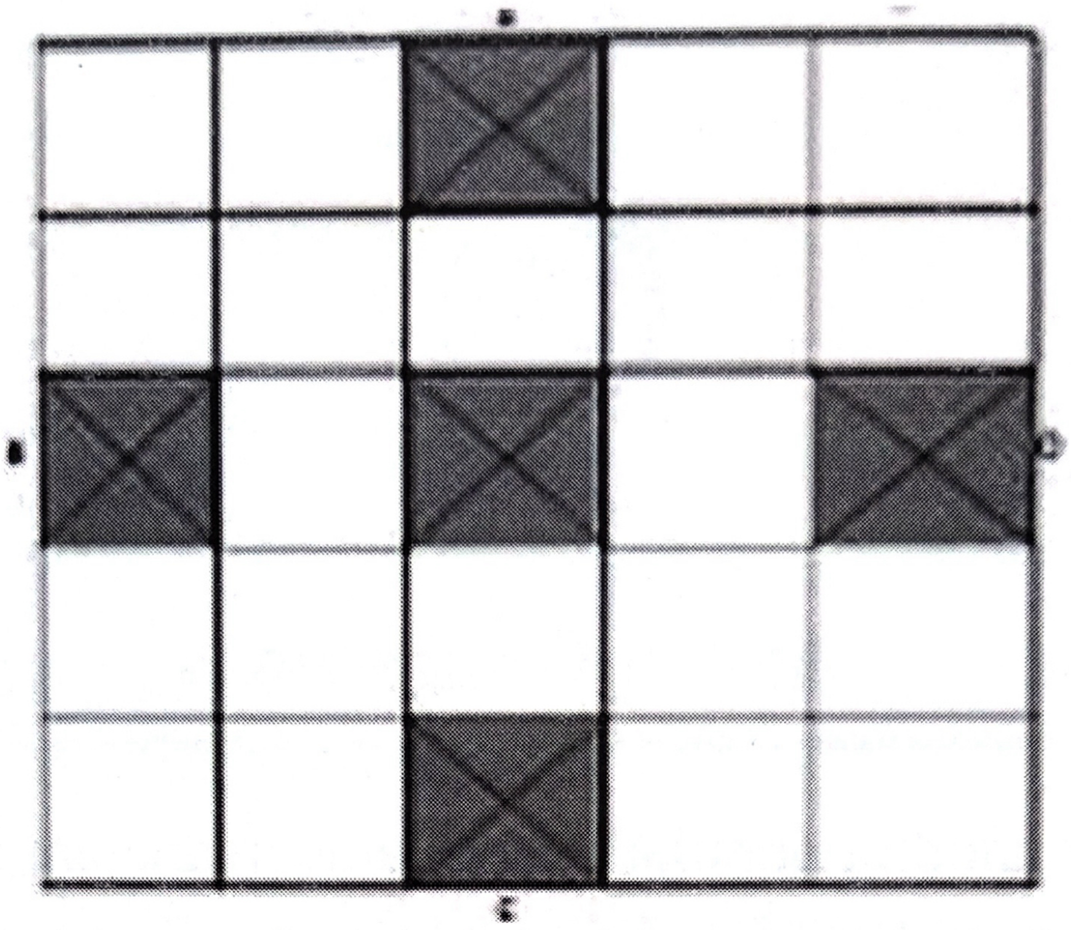


Fig.71:5x5 grid game

Fig.70 & 71:This game is played with a grid having 5X 5 squares as shown on right side or on 7X 7 grid squares depicted on the left side.Moves are based on eight cowrie throws and is similar to Pachisi in some respects.5X5 version is faster.

Ashta chamma can be played by two to four people.It is played with split tamarind pieces as well. Starting points are marked and moves of pieces are anti-clockwise on the outer and clockwise in the inner circles. One cannot start unless one gets eight or four points. The first piece cannot enter the inner circles unless it kills one opponents piece. Otherwise the piece has to circle in outer squares only.The number of movements depend upon the number one gets on the throw of tamarind pieces.This game is more like Pachisi and whoever gets his pieces into the home wins the game.Like in pachisi the player cannot kill the opponents pieces when they are on safe or crossed places. Many forts have the design of this game but we could not get a good photograph of the game.

8

Wana Guntalu / Rain pits

'Wana Guntalu' is another intersting game.It has eight scalloped pits on either side and each is filled with eight tamarind seeds.One takes all the eight pieces in one pit and drops one each in every pit. Once the pieces are over he picks up the eight from other adjacent pits and does the same.When two adjacent pits are empty he wins the game.Such pits are seen in most forts and probably were used for playing the game known in Telugu as 'wana guntalu'(Fig: 72).One could

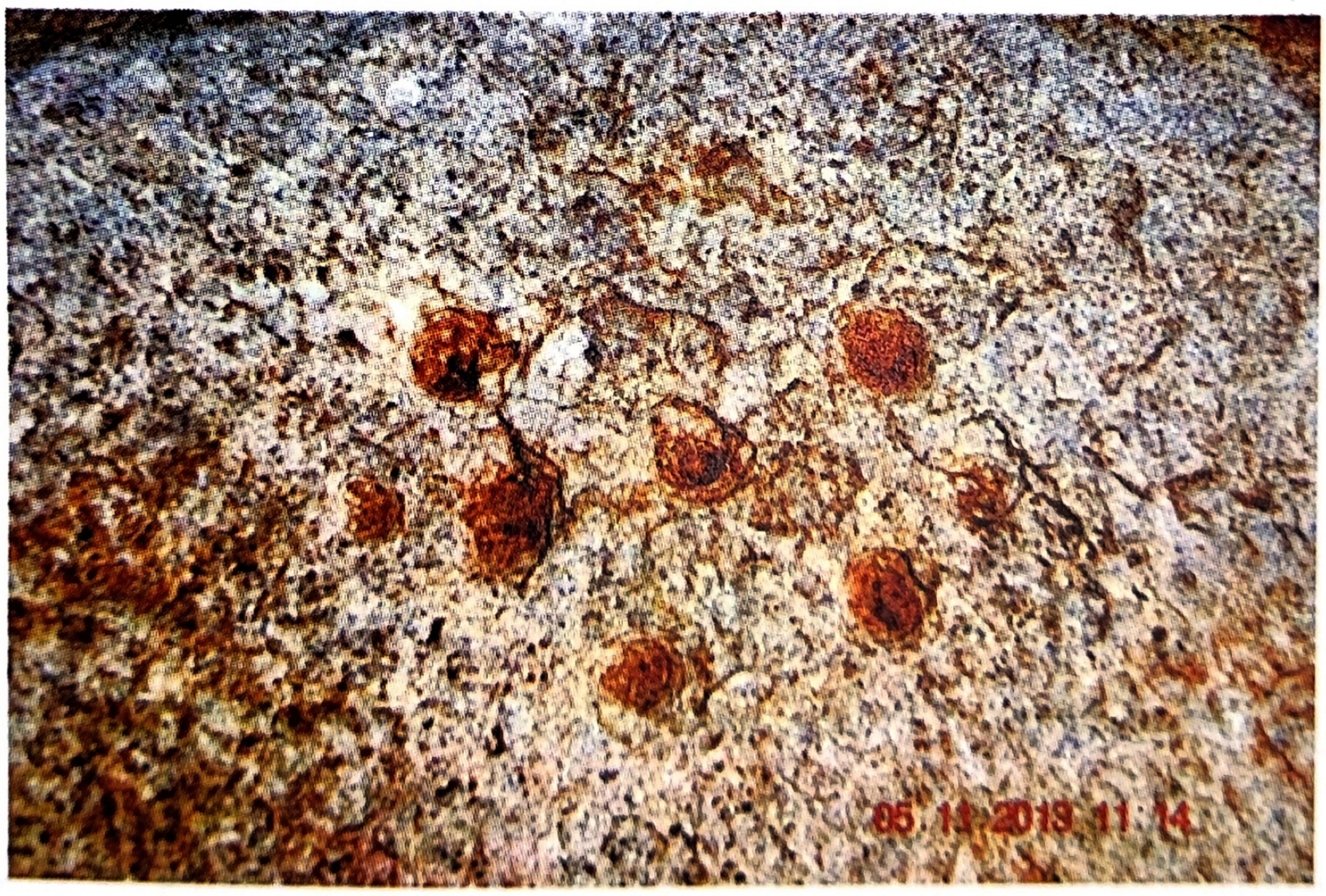


Fig.72: Wana Guntalu game. Such a game with cup-shaped depressions in stones were discovered in excavations and studies in Petra and Nabataean site. In some parts of the world similar game is known as Mancala.

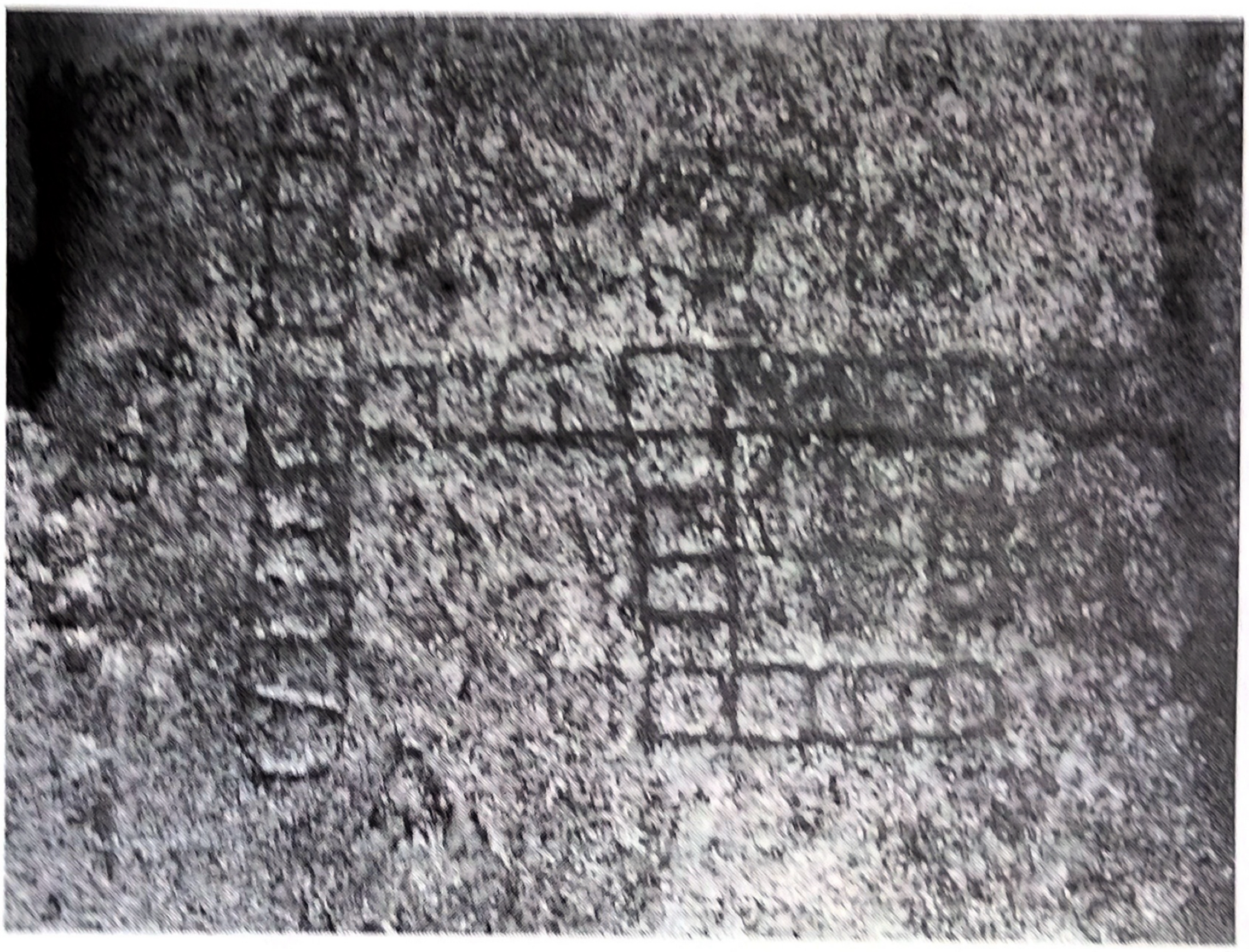
witness such games in other parts of the worldsuch as Africa also. There are variations in the design of this game in different parts of the world.

9

Ancient board games which were forgotten

There were many types of board games which were played in ancient times which could not be identified at the present time. This information is based on the designs of these games found in some medieval forts and temples. The designs of these games do not match with the games that are known today. It is obvious that these games were forgotten by the people long time ago. Such games can be divited into three broad categories. (1): Games with squares: Four such games are depicted in Figure.73. Some of these designes are reminescent of the mathematical solitaires and games which are played in recent years (Schwartz 1961).It is well known that India had a great mathematical traditions. India is credited with the invention of zero and its symbol.There are very many great names in Indian mathematics such as Aryabhatta who are known the world over. Aryabhatta is considered to be the father of trigonometry and contributed greately to Algebra, astronomy and Discrete mathematics (Velukutty 2011). There were also many other mathematicians in ancient India such as Bodhayana, Brahmagupta, Madhava, Bhaskara II Parameswara, Pingara, Kuttaka and lastly Ramanujam etc who contributed to the development of mathematics (Swaminathan

2013). Mathematical researches in India during the 5th to 20th century have been summarised (Bag 2012). India's contribution to Arab mathematics is well recognized (Jaouiche 2010). The design of some of these ancient board games may be the works of ancient mathematics scholars of the past. Yantras and mystic diagrams were used by mathematicians in ancient and medieval India (Gupta 2006). It appears that these bizarre games need a detailed study by mathematicians in future.



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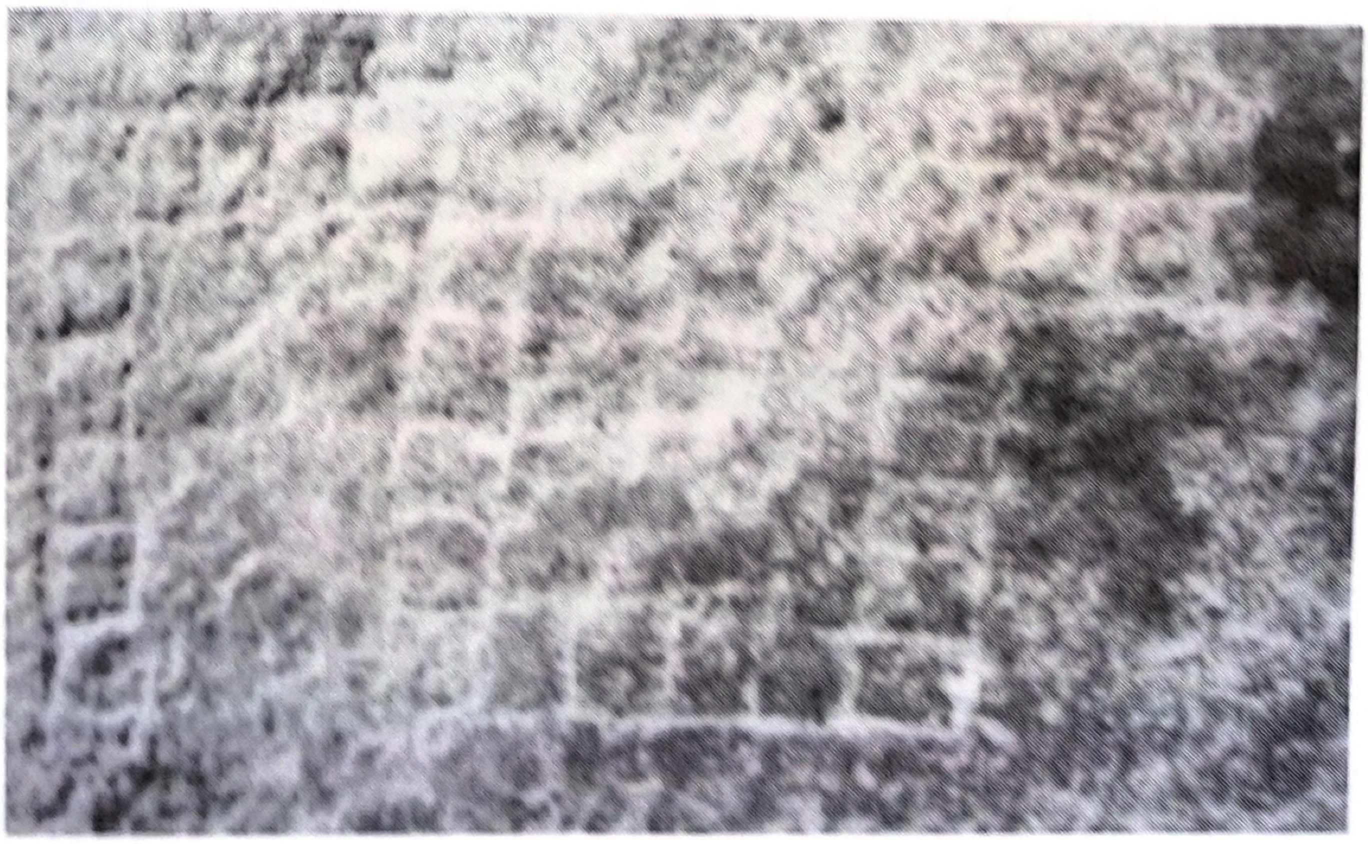

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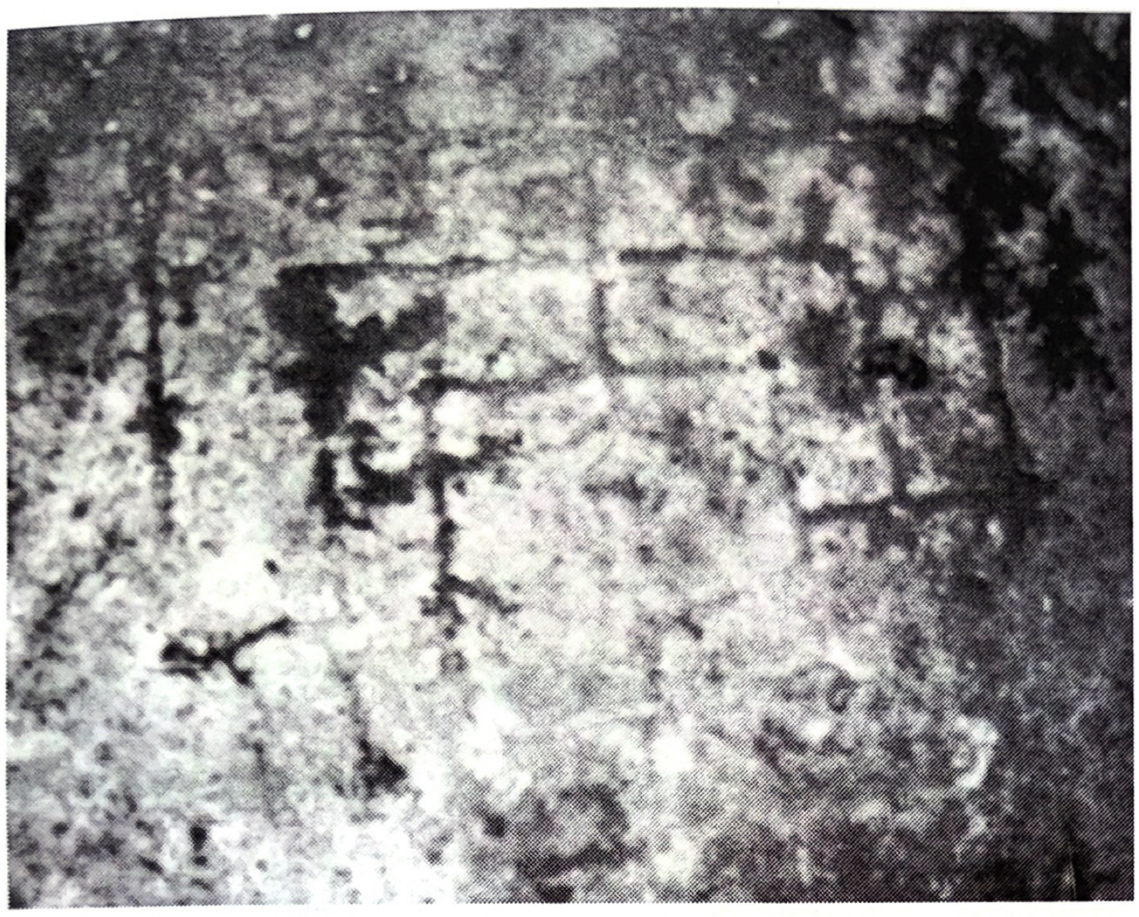

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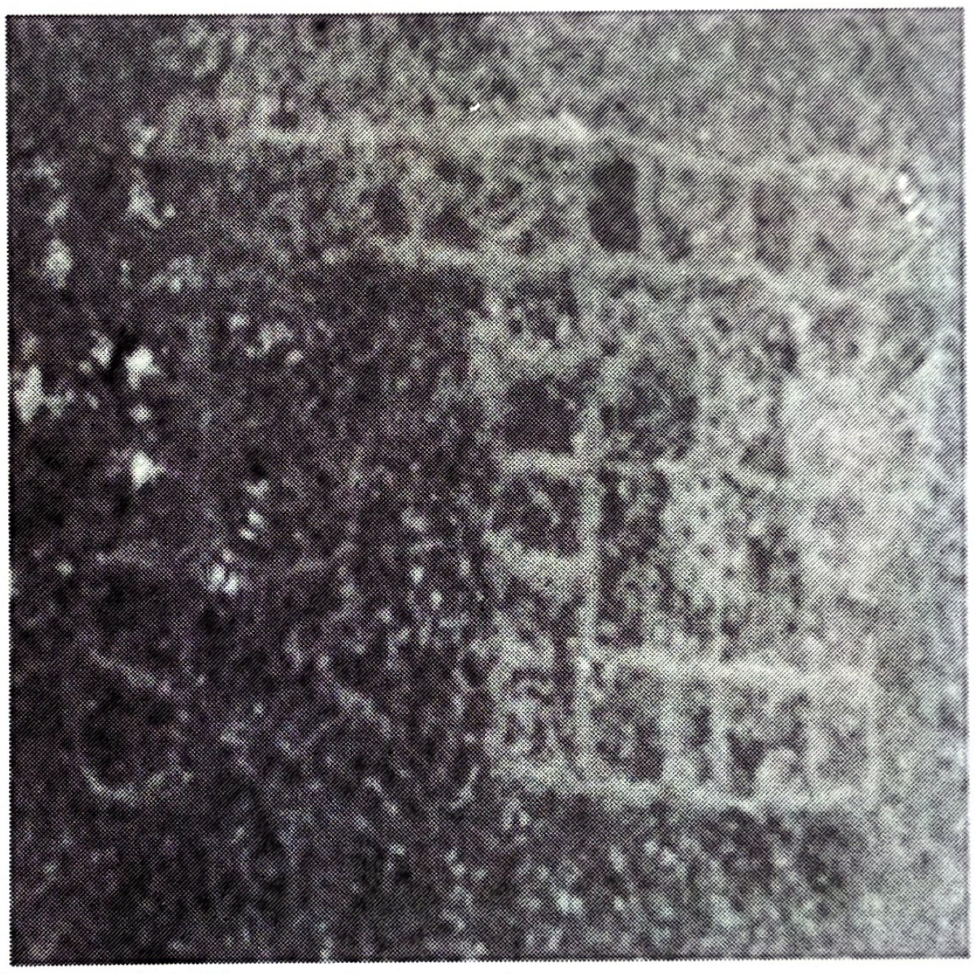


Fig.73 a, b, c & d: Four Unknown games designed in squares inscribed on stones in forts and temples. The games cannot be identified with the board games of the present time.

(2). Second type of unknown past games are designed on some kind maze and one such was a war game described in Mahabharata epic. It is a maze and the player has to plan to get out of it, otherwise one loses the game. This kind of maze was used during wars. Mahabharata epic describes the story of Abhimanyu of the Pandava tribe who could not come out of the maze and gets killed. The game involves the ability of the player to plan escape from the maze which is a confusing and baffling network of winding and inter communicating paths designed as a puzzle for those trying to find a way out of it. Such a maze is shown in Fig.74.

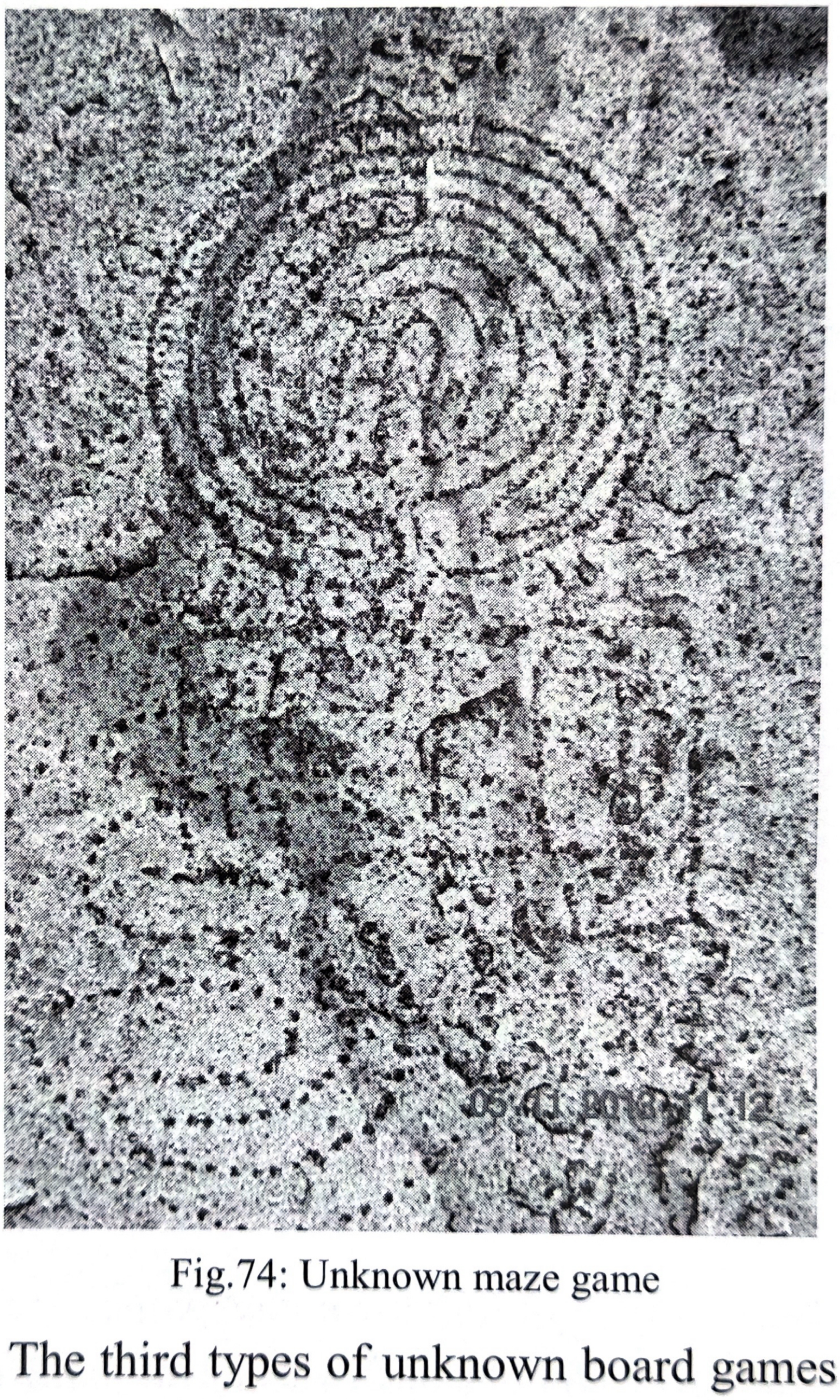
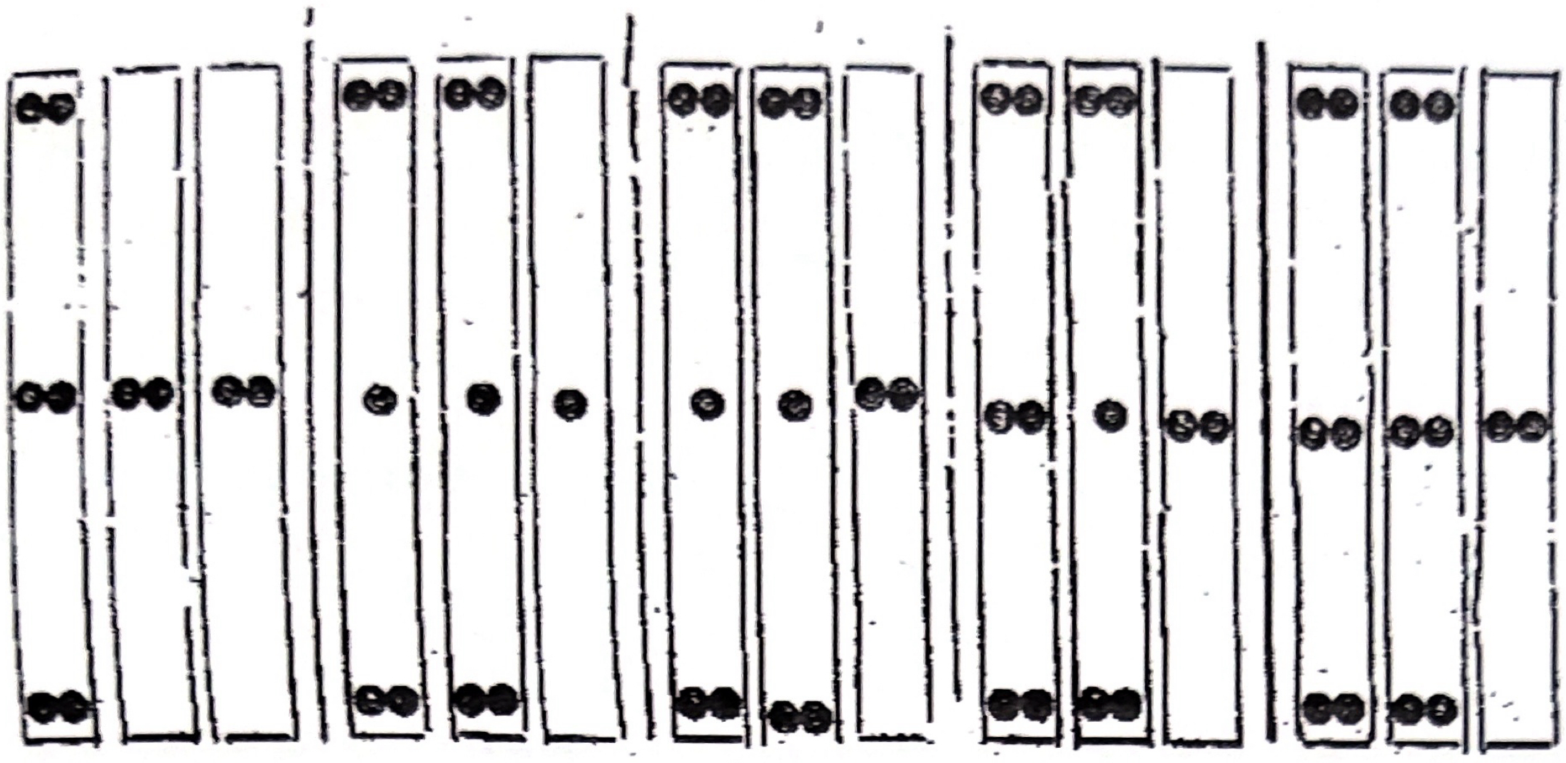


Fig.74: Unknown maze game

(3): The third types of unknown board games come to light when one pores over the designs of such games in ancient texts including palm leaf manuscripts. Obviously these games are not being played now and their rules of play are not known (Fig 74 & 75).



75

Fig.75: Photograph of this game is given ancient text described by Harikrishna Sharma. This game used to be be played with different numbers and the rules of the game are not clear.

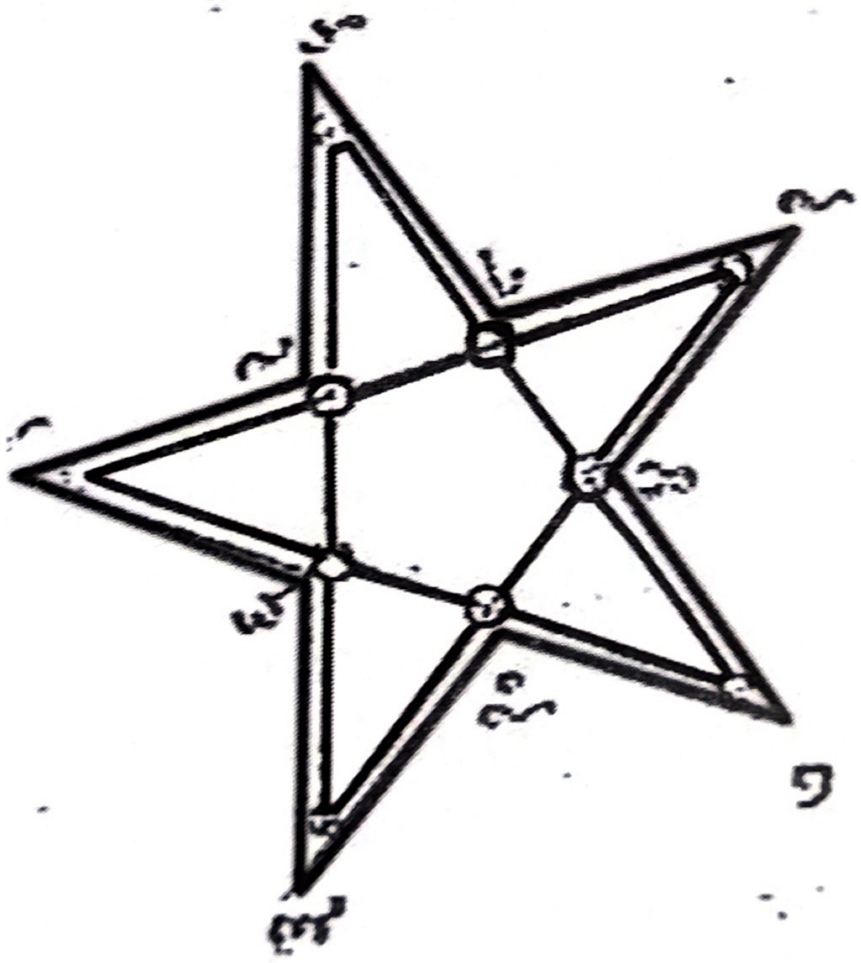


Fig.76: Another ancient game and details of the game are not known.Yantras or mystic diagrams have similar configuration and they were seen commonly in ancient times especially in religious functions.

It is obvious that many types of ancient board games have been forgotten over the centuries.Some of these can be revived for pasttime.

Epilogue

History records that man had been a keen game player for thousands of years. Earliest games probably were of simple nature and as the civilization has advanced the games have become more complex.Chess is the best example of that and this game started as a war game thousands of years ago in India and has spread to all parts of the world. Besides chess there were other board games which were played in ancient India such as Pachisi, Dhadi, Tiger and Goats game etc. There were other games like wrestling, hunting etc in ancient times. It is true that board games are not as popular as the physical games such as football, hockey and cricket in recent times. However a study of these ancient board games and their evolution makes an interesting reading.There were very many games which were played in ancient India but some of them were lost and this fact is evident from their drawings on ancient forts and temples. These games could not be identified at the present time. Games are not merely for pasttime and amusement and should not be viewed as a mere entertaining diversions.The role of chess in the birth of cognitive science and artificial intelligence has been recognized.Game theory also evolved from the study of games. This theory is a branch of mathematics used to analyse competitive situations whose outcome depends not only on one's own choices but also on the choices of oppenent players as witnesed in the games.This theory had a major influence on strategic thinking and has applications in economics, politics, military science, sports and other fields as well.It is heartening to know chess has been made compulsary for students in their formative years in in schools in some states of India such as Gujarat.

Games are categorized according to the number of players involved in it.Chess started as a game for four people but now it is played by two persons. Some games can be played by four people such as Pachisi and Tiger and Goats games. Later game has been modified so that it can be played by different number of people. Same was true of Ashtachamma that can be played as a game of shorter or longer versions. The designs of such a games are modified accordingly and the number of tigers and goats vary. In all these board games such as chess the player knows everything about the game and the plans and strategies of opponents. Whereas in some other games such as poker player do not know the cards of other players. Playing of these types of games is useful especially in children to develop their cognitive skills and they can be applied to real life situations such as warfare, political conflicts and economic issues. Game theory evolved around chess and other games and it is applied mathematics to analyze certain situations of the game or interplay between opposing parties.

It is interesting to know that some of these ancient board games originated in India and they are also played in other parts of the world by different names.Some of the ancient board games which are forgotten may be revived similar to the revival of ancient dance forms depicted in the sculptures made in medieval times.

Select Bibliography

1. Agarwal, U.: Khajuraho sculptures and their significance. S.Chand & Co., New Delhi, 1964, p.174.
2. Bag, A.K.: Mathematics and mathematical researches in India during fifth to twentieth centuries-profiles and prospects.Indian journal of History of science.47, p.473-512, 2012.
3. Culin, S.: Games of the orient.Charles E. Tuttle Company, Rutland, Vermont, 1895.
4. Falkener, E.: Games ancient and oriental and how to play them. Longmans Green and Co., London, 1892.
5. Gupta, R.C.; Yantras or mystic diagrams: a wide area for study in ancient and medieval Indian mathematics. Indian journal of History of science.42. p.163-204, 2006.
6. Hooper, D., Whifld, K.: The Oxford companion to chess. Oxford university Press, 1992.
7. Jaouiche, K.: India's contribution to Arab mathematics.Indian journal of History of Science. 46, p.189-204, 2010.
8. Jones, W.: On the Indian game of chess. The journal of the Royal Asiatic society, London, 1817, p.185-188.
9. Murray, H.J.R.: A history of chess. Oxford University Press,1913.
10. Pratapa Reddy, S.: Andhrula Sangika Charitra (Telugu). Sahitya Vaiojayanti publishers, Hyderabad, 1949.
11. Ramachandra Murthy, N.S.: Forts of Andhra Pradesh, Bharatiya Kala Prakashan, Delhi, 1996.
12. Sachau, E.C.: Alberuni's India. Rupa & Co.New Delhi, 2009. First published by Trubner & Co.Ludgate Hill in 1888..p.170-172.

13. Sarma, I.K.: Parasuramesvara temple at Gudimalla.Dattsons, Nagpur, 1994.
14. Harikrishna Sharma, V.: Kridakausalyam. First edition, Delhi, Nag Publishers, 1982.(Published with the financial assistance from the ministry of Education & Culture, Government of India).
15. Phillips, C.: The complete illustrated history- Atec & Maya, Metro Books, New york, 2013.
16. Salomon, R.: Indian epigraphy- a guide to the study of inscriptions in Sanskrit, Prakrit and other Indo-Aryan languages. Munshiram Manoherlal publishers Pvt Ltd, New Delhi, 1998.
17. Sastry, C.A.P.: Kuchinapudi, inscription of Repalle taluk of Guntur district (AR.No. B 310 of 1937). South Indian Inscriptions, Vol. XXXI (Telugu), p.337.
18. Scheppler, B.: Al-Biruni- master astronomerr and Muslim scholar of the eleventh century. The Rosen Publishing group Inc. New Yotk, 2006.
19. Schwartz, B.L.: Mathematical solitaires & games-Recreational mathematics. University Press, New York, 1961, (printed in India-1998).
20. Shenk, D.: The immortal game-a history of chess,Double Day, New York, 2006.
21. Sherwani, H.K., Joshi, P.M.: History of medieval deccan(1295-1724). Vol.II (Mainly cultural aspects. The government of Andhra Pradesh, Hyderabad, 1974.
22. Somasekhara Sarma, M.: History of Reddy kingdoms (circa 1325 AD to Circa 1448 AD). Andhra University, Waltaire, 1948.
23. South Indian Epigraphy.Koppolu inscription from Kadapa. South Indian epigraphy. Vol.39, p.89-90, 1938-1939.
24. Swaminathan, V.: Ancient sciences and archaeology-Journal of the Ancient sciences and archaelogical society of India. Vol.V, Eds.M.D. Sampath & N.Pankaja.B.R. Publishing corporation, New Delhi, 2013, p.43-52.
25. Velukutty, K.: Deeper roots of discrete mathematics in ancient India.Ancient sciences and archaeology-Journal of the Ancient sciences and archaelogical society of India. Vol.IV, Eds.M.D. Sampath & N.Pankaja.B.R. Publishing corporation, New Delhi, 2011, p.141-147.

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